The Gunderson Story
An American Classic



E.M. Lundquist

— Author's note —

Here's a salute to Gunderson – You've come a long way in the 75 years since you were a baby. And it looks to me as if it's only the beginning. Already, in August, 1992, you're 75 acres bigger in Cleburne, Texas. This is where I get off, but my fellow retirees and I will be peeking between the slats in the fence, street-bossing your work, be it for land or sea.

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About the Author

On June 30, 1984, E. M. "Benny" Lundquist completed a 46-year career as manager of purchasing for the Marine and Rail Equipment Division of FMC Corporation and its predecessor, Gunderson Bros. Engineering Corporation, of Portland, Oregon, builders of railroad cars, barges and ships and industrial equipment.

He was responsible for the purchasing and traffic of his company's equipment, materials and steel. During his tenure he bought or oversaw the purchase of more than two million tons of supplies, valued at over $1 billion.

During his working career, Lundquist was an active member of the National Association of Purchasing Management (NAPM) at both state and national levels. He lectured purchasing trade groups and conducted college level classes featuring various purchasing and negotiation skills. He was a member of NAPM's National Steel Buyer's Group Executive Committee and wrote its monthly steel survey for NAPM's Report On Business. He was also a member of NAPM's National Business Survey Committee. In September, 1975, he qualified and became a Certified Purchasing Manager, or CPM, having passed NAPM's established requirements for standards of competence, conduct, experience and proficiency.

He was active in Cub Scouts, Boy Scouts and various fund raising activities for local charities.

Lundquist was born and raised in Smithfield, Utah. The following is a brief history of his life written by his wife, Maxine E. Lundquist, and presented by her during his retirement party:

"Born January 20, 1915, Ben was the fifth of six boys born to Eric Benjamin and Eugenia H. Lundquist. His father was a paint contractor and the boys learned to use a paint brush, make paste and hang wallpaper at an early age and were a great help in the business.

"He attended North Cache High School and Utah State University. He was a member of a vocal quartet that toured and performed at many high school and college functions throughout the state (of Utah). He often played the piano in his brother Ed's orchestra in Logan, and was from a very talented and musical family.

"Because of the economic depression, unemployment, and financial drain on his widowed mother, Ben left home in 1936 to make his own way in the world. He rode the rails to California and worked at many and various jobs to eat and keep body and soul alive.

"On to East Stanwood, Washington, working as a chemist on a dairy farm making goat cheese and adding the magic formula turning the cheese into Health Food.

"He next worked as a combination waiter-bookkeeper in a chain restaurant located in Portland, Oregon City and Eugene. He played his first game of golf in Eugene and became hooked for life after parring the ninth hole at Laurelwood.

"He made contact with the Office Manager at Gunderson Bros. and in February, 1938, was employed in the tool room at the Linnton Plant, which at that time built logging trailers. (Being a former painter, one of the first things he saw that needed to be done was that the office walls and ceiling needed painting. He ordered some paint, found a good paint-brush and a ladder and did the job. The brothers were happy to see the sparkling clean office.)

"About this time, he became engaged to Maxine Sullivan. They married in September, 1939, and as a result of this union produced son Rod, daughter Kristine, five grandchildren, a dog Sloopy, and a cat Pooty Cat.

"So begins the adventure of an education in hard work, comedy, tragedy, and many personal relationships and friendships through the years.

"Chet and Al Gunderson were very unique men with great business foresight for their time. Both had strong personalities and individual characters! They were a great influence in Ben's life. As the company grew, he was fortunate to be there at the right time and had the opportunity and challenge to grow with it through the years. It was not always smooth sailing, but it all came together somehow with the hard work and cooperation of many people through the years.

"During the war years when steel was hard to come by, Ben kept steel supply flowing by retrieving plate and structurals from the scrap yards of Zidell and Schnitzer. I am sure he could tell stories of a similar nature for hours.

"Since the purchase in 1965 by FMC, the company has expanded in many ways and is a far cry from that small Gunderson Bros. that struggled so to make it all possible by its humble beginnings.

"After forty-six years with Gunderson Bros. and FMC Corporation, Ben will retire with many great memories and few regrets."

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Preface

Acknowledgments

My very first and special thanks is to my wife, Maxine. I began going "steady" with her before I joined Gunderson in February 1938, then we were married on September 7, 1939. So, by now, she has already heard and lived the Gunderson story for 54 years.

It's generally thought that some office people have bankers' hours. It's not so. Neither do some housewives. After a day at the office I went home, showered, put on a fresh suit, shirt and tie, and Maxine and I went out to dinner with a salesman from out of the city. She deserves a medal for listening to all of the haggling and shop talk, enduring all those night sessions with salesmen from all over the country. Sometimes we wondered why we did it, but it all went with the job. Many problems were settled over refreshment and dinner. A great many lasting friendships also resulted.

Friday night blues

As a manager, I was fortunate to have many good friends in the shop, office and senior management. I associated with all of them on both a business and social basis. From this viewpoint, I was privy to nearly everything that went on, good and bad.

There were many hectic times: times that the company was in peril of bankruptcy; times when rumors had us being sold or shut down; times when the two brothers feuded and I had to "straddle the fence", without much success; and times when I was involved in internal strife with other department heads.

Every Friday night, it seems, I heaped a whole week's turmoil upon Maxine. Thankfully, her support and counsel kept me stable throughout those ordeals. By the time I retired, she knew almost as much as I did about what went on at the plant.

Down in the dungeon

Then, during the past few years, writing this history, I spent most of my days in front of a word processor and printer, in my office in the basement of my home. Maxine referred to it as "the dungeon". She kept asking, "When in the world will you be done with your project?" Looking back on my answers and promises to her, I'm afraid they were quite misleading. Writing is like painting – too much, or the wrong color, here or there, and you have do it over. I wanted to paint word pictures of the unique men and women with whom I had been associated – tell about their various exploits, ideas and inventions – they were as much the capital of Gunderson as was its money. And it took time to detail the pictures so they would be just right.

So to Maxine, my sincerest love and thanks for her support; for the thousands of hours of time she invested in the company's interest. And for her patience during the writing of this history.

And I thank my son, Rod, and daughter, Kristine, for their encouragement, interest and love.

In mid-1986, I began writing and contacting my former associates to search their memories for humorous, interesting or sober facts that they felt ought to be included in this history.

I said, in my letter, "When the story is finished you'll get a copy of it, God willing that I finish it, for it will take a few months to do." The original works was completed in

1992, approximately seven years after it was begun, and about ten years after the idea took root in my brain.

Grateful to the contributors

I am grateful to Shelby Clark, a professional writer and writing teacher, for her valued assistance in editing this work. Her knowledge of literary rules and principles resulted in much overhauling of the composition. She eliminated misused words and expressions, and refined its style. Her kindness and encouragement were added gifts. When my chapters were returned to me with her corrections, she was tactful with her criticism and generous with her praise.

Gunderson Inc. retained Shelby to edit this work. Her qualifications were ideal. She majored in English, receiving her Bachelor of Arts degree and teaching certificate from Lewis and Clark College in Portland. She received her Master of Arts in English from State University of New York at Buffalo, New York. She then became a Writing Teacher at University of Washington, Seattle, Washington. She is proficient in numerous types of computer business software. She has increased her professional skills by participating in many seminars and programs specializing in advertising, journalism, management, selling, and writing. In addition she has had on-the-job experience in her field for 14 years.

I greatfully acknowledge the excellent editorial work of Larry Leonard, a Portland author, who edited and condensed this history for use in a Gunderson Inc. company publication. His sense of the most important milestones combined with his arrangement of events resulted in a crisp and easy flowing story.

I am indebted to William F. Furman and C. Bruce Ward of Gunderson Inc. for their generous support in publishing this work.

Bruce Ward was very considerate with his help. He provided a thorough account of Gunderson from the time he joined it to the time he and Greenbrier acquired it, and up to the present. He gave me his excellent insight into the last few years of the lives of Alvin E. and Robert E. Gunderson. He personally wrote sections of Chapter 14, "Gunderson Inc. is Reborn", for which I am much obliged.

Bruce Harmon, Director of Communications, Gunderson Inc. provided encouragement and guidance. He gave me full and free access to his press and photo files, without which I would have been unable to compile this history.

As for publishing this history, three of Harmon's staff were most helpful: Yvonne Dubb, Julie Ward and Adreanne Weinmann.

Throughout the writing period Julie and Yvonne researched much material and information needed to fill the gaps in my memory. Nearly all of the issues of the three major company magazines, the *Gunderson Gunner*, *Torch & Stinger* and *Gunderson News* , were hustled up for me. These company journals were indispensable to this effort.

Yvonne Dubb struggled through the conversion of this history from my original software to Gunderson Inc.'s software, then painstakingly inserted corrections and changes and relocated chapters. Adreanne and Yvonne worked together on reformatting the entire history.

Julie Ward, with critical eye and literary skill, picked up many errors and posed questions as to clarity, duplication and form throughout the text.

Julie, Yvonne and Adreanne were also responsible for the publishing and binding of the history. I also thank Yvonne for typing up the lengthy chart of Gunderson marine and industrial jobs. It was a tedious and nerve-wracking project of over 50 pages. Although

the chart is not included in this history proper, it is now a part of Gunderson Inc.'s historical archives.

The *Gunderson Gunner* proved to be a valuable source of news about our work and our people during World War II and for a brief period during 1952 and 1953. I'm grateful to the *Gunner's* publisher, the late William F. Selleck, for his thorough reporting of the company's activities during those periods.

I thank Ackroyd Photography, Inc. – Hugh Ackroyd and Beth Robinson, Ackroyd's Vice President "In Charge of Everything", (according to Hugh). Generously, they allowed me full access to their photo studio and to hundreds of negatives and prints of photos taken by Ackroyd and his cameramen at Gunderson and MRED over the years. For several days, I reviewed those dated photos in order to recall the details of the many jobs that Gunderson produced. They also provided me with an dated index of all these photos. This was valuable in determining launch and delivery dates of Gunderson projects.

I am indebted to many associates, friends and resources who furnished special information for this history. Their input was vital:

Aard Ady. He is a retired, former officer of the United States National Bank, and Gunderson owes its life to him. In 1939, Gunderson was delinquent on its bank debt, so Ady was empowered by the bank's president to foreclose on Gunderson and seize its assets. After Ady investigated Gunderson, audited their books, reviewed their product lines, and backlogs; and saw the hard-working, conscientious employees, whom he felt should not be thrown out of work, he convinced the bank to give Gunderson more time and assistance to work out their problems. I had two sessions with him in which he related the details of that crucial event.

Thanks to W. R. Galbraith, Vice President Marketing & Sales, The Greenbrier Companies. He provided many details of Gunderson's history from the 1960's to the present. He reviewed and checked several of my chapters for accuracy.

Saundra N. Gunderson, widow of Robert E. Gunderson. She supplied information of the youth of Alvin E, Robert and Chester E. Gunderson.

Virgil C. Hatfield. He took the time to write a nine page history on MRED. His topics were titled "The Cleanup", "Plant Security", "The Chevron Tankers", "Railcar Production" and "Accident Prevention".

Warren L. Howe, Jr., Gunderson's Contract Manager from 1951 to 1965. He sent dozens of photos, the Gunderson brochure, "The Steel Men", and much history on how Gunderson got its start in railcar underframe work. Also good stories of bridge work, buildings and the Wahluke Siphon.

Leighton W. Johnson, retired Chief Engineer, Gunderson Bros. Engineering Corp. He was most helpful with answers to scores of questions asked of him during the past several years.

Elaine Olsen, widow of Chester E. Gunderson. She filled-in some history of Chester E. Gunderson's youth and of his early business enterprises.

Charles E. "Charlie" Sikes. He supplied detailed information about the Gunderson company and its financial problems between about 1939 to 1942; and of the Equipment Division, from its beginnings in Eugene, Oregon in January, 1945, with $25,000 for working capital. Chet Gunderson's one piece of advice to Charlie was , "Charlie, don't ever ask us for any more money." "And we never did," recalled Charlie. I had several sessions throughout the last few years with Sikes. I quoted his letters, verbatim in some cases.

I'm grateful to Sikes for suggesting the name of this history, "The Gunderson Story, An American Classic." During a conversation at his home, while checking some of my writings, Charlie commented casually , "The story of the Gunderson brothers was an American classic." Then and there, with his permission, I thought that it would be an appropriate title.

Helmer J. "Doc" Sundt, Sales Manager for Gunderson Bros. between March, 1946 and November 1, 1951. He wrote a five-page recollection of Gunderson memories detailing that period of time for me.

The following associates, friends and resources, listed alphabetically, have been especially helpful. Several have been acknowledged within the body of the history:

Charles L. "Chuck" Anderson, Rail Production Manager, Gunderson Inc.

H. Kenneth "Andy" Anderson, Consulting Engineer and retired City Water Engineer, Bureau of Water Works, City of Portland, Oregon.

The late Anita G. Baird, retired Associate Purchasing Agent for MRED.

Lawrence E. Barber, former Marine Editor, *The Oregonian* newspaper.

Beaverton Public Library, Beaverton, Oregon.

Boise Public Library, Boise, Idaho.

E. N. "Ed" Brumley, Sr. Vice President Production & Manufacturing, Gunderson Inc.

John E. Carroll, Jr., Former Division President, Marine & Rail Equipment (MRED) Division of FMC Corporation and currently, President, Thrall Car Manufacturing Company, Chicago Heights, Illinois.

Craig W. Coffey, Assistant Vice President Material, Quality and Environmental Affairs, Gunderson Inc.

Lucille Crews, widow of Archie Crews, plate shop foreman.

Pers Crowell. (layouts and artwork) *Gunderson Gunner*.

Ferdinand "Fritz" Dummer, retired MRED Machine Shop Superintendent.

Bridget Davis, Personnel Administrative Assistant, Gunderson Inc.

Scott S. Eave, Assistant Manager, Human Resources, Gunderson Inc.

Rod Eckerson, Senior Buyer, Port of Portland.

Lois M. Emery, Contract & Billing Coordinator, Gunderson Inc.

Carroll Evatt, Former Purchasing Agent, Southern Pacific Transportation Company.

Don Fitzsimmons, West Coast Sales Manager, Brenco, Inc.

Ernie Fortune, retired truck driver, MRED.

Robert "Bob" Garrett, retired Gunderson Loftsman.

Pat Gillenwater, retired Mold Loft Foreman, Gunderson Inc. .

Fred Groff, President, Standard Forge & Axle Company, Chicago, Il.

Terry Halpin, Marine Engineering Manager, Gunderson Inc.

Roger Hawkins, Former Rail Car Engineer, Gunderson Inc.

"HERB'S HOT BOX OF RAILROAD SLANG" By J. Herbert Lund

Esther Herron, widow of Jack D. Herron.

Elliot B. Higgins, Jr., Plant Engineer for Gunderson 1965-1968.

George E. Higgins, Manager, Human Resources, Gunderson Inc.

Everett B. "Ev" Hill. Retired Maintenance and Electrical Superintendent, MRED.

John H. "Johnny" Hohler, former MRED Marine Engineering Manager. 1952-1980.

Rudy Holthaus, Engineer, Gunderson Inc.

Joe Huserik, retired Carpenter Superintendent, MRED.

Michael T. Illias, retired Purchasing Group Manager - MRO, Gunderson Inc.

Charles H. "Chuck" Johnson, Former Division President, MRED.

P. F. "Pat" Juggert, Buyer at Gunderson Inc.

Robert A. Jurgenson, Certified Public Accountant, Eugene, Oregon.
Rob Jurgenson, Certified Public Account, Danville, California.
Dale Jutila, Engineer, City of Portland Water Bureau., Portland, Oregon.
Gary S. Kaleta, Vice President Railcar Engineering, Gunderson Inc.
Don Kiive, Senior Equipment Designer, Gunderson Inc.
Ray H. Kinchloe, retired Shipping and Receiving Manager, Gunderson Bros. Engineering Corp. At age 97, he is Gunderson's oldest living retiree.
Bruce J. Korter, Vice President, Grubb & Ellis.
Keith A. Kugel, Purchasing Group Manager – Steel/Production Purchasing, Gunderson Inc.
Leonard Kutch, Engineer, Gunderson Inc.
John Lafore, Material Handling & Control Dept., Gunderson Inc.
Robert J. Landregan, retired Manager, Rail Car Engineering, MRED.
Tom Lee, Purchasing Agent, Gunderson Inc.
The late Eddie Leo, initially houseboy for Chet Gunderson and, later, he was a Gunderson employee.
Mrs. William E. Love, widow of William E. "Billy" Love, Tank Sales Engineer, Gunderson Bros. Engineering Corp.
M. P. "Mike" McMurry, Manager Material Handling & Control, Gunderson Inc.
George Miller, retired Machine Shop Foreman, MRED.
Multnomah County Recorder's office.
Robert Murphy, Traffic Supervisor/Purchasing Agent, Gunderson Inc.
S. L. (Sherry) Nylander, Executive Assistant, Gunderson Inc.
Iva E. Okesson, widow of George Okesson, foreman, Gunderson Bros. Engineering Corp.
Oregon Historical Society.
Larry Patella, Manager, Navigation Division, Port of Portland.
Allen B. Perry, Purchasing Manager, Gunderson Inc.
Photo Arts Commercial Studios.
Robin Plympton, former Business Manager, Boilermakers' Union and Chester E., Gunderson's grandson.
The Portland Building and its receptionist.
E. V. Prentice Co.
Larry Preuss, former Gunderson construction engineer, Gunderson Bros. Engineering Corp.
Public Library, City of Portland, Oregon.
Public Library, City of Seattle, Washington.
Ramona E. Reule, former editor of this history.
Louie Ripoli, former Warehouse Foreman for Gunderson.
Don Rose, Retired Vice President, Purchasing, Southern Pacific Transportation Company.
Mrs. William (Esther) Rush, Aino Malinen's sister.
Muriel Spear, retired Personnel Manager, MRED.
Sada Tarshis, retired Executive Secretary, MRED.
William R. Tagmyer, former Sales Manager, MRED.
Doyle R. Thomas, Director Rail Services, Gunderson Inc.
The late O. Ray Thomas and his wife, Avis. Retired Marine Superintendent, MRED.
Timken Roller Bearing Co. Canton, Ohio.

Robert W. Utzinger, former tank and construction engineer, Gunderson Bros. Engineering Corporation.
Howard D. Werth, Vice President & Controller, Gunderson Inc.
Charles W. "Chuck" Wingrove, retired Mechanical Engineer for Gunderson.
L. Clark Wood, President, Gunderson Inc.
Percy Wood, retired Crane Operator Foreman, Gunderson Bros. Engineering Corp.

To all of the above, I am very obliged for their contributions to this project, and for making it possible.

Introduction

It was nearly time to retire and end my career after 46 years of service with the Gunderson brothers and their successors, FMC Corporation. I began to wonder what I would ever do when it was time to stop driving my car up over the west hills from my home and down to the river to my place of work on Front Avenue in Portland.

Throughout the years I thought how remarkable it was how Gunderson grew from its foundings as a one-person shop to a giant manufacturing plant where thousands were employed at one time or another. I guess a big city's worth of people came and went through Gunderson's doors as "turnover". Some quit for better jobs elsewhere, were let go, retired or passed away. At the end of World War II there were hundreds from "non-essential" walks of life who came to work in Gunderson's defense plant and went back to being lawyers, investment brokers, artists or whatever one does during peacetime. Women welders and ship fitters went back to being housewives.

The thought crossed my mind that someone ought to record the many complexions of that place where I worked, of the people who came and went and of those who stayed out their career at Gunderson.

No one has ever painted a word portrait of Al and Chet, so that would take some doing. I was privy to their wealth and perks, their trials and tribulations, their family lives and their feuding . I saw them reeling in near bankruptcy, knew of their ailments and weaknesses and could hear their colorful language when they were cursing at each other down the hall. During their final battles many of us had to take sides. Some straddled the fence and still survived.

There was tragedy. Robert E. "Bobby" Gunderson who was slated to become President perished in a plane accident. Al was never the same after Bobby died. His health failed him and soon he too, was gone. Chet died in ill health but had enjoyed a few of his retirement years. Chet did not attend his brother's funeral.

There was plenty of humor and fun like when Billy Love's brand new Buick was demolished during testing of a "Ferris-wheel" type of parking machine that Chet wanted to build and sell. The car's chair overturned and dropped the car to the ground. Or the time when Chet's farm was flooded and an old sow and her litter were brought up to the Front Avenue plant and placed in a make-shift pigpen made for them out of empty oil drums. The old sow rooted her way out and the little ones got loose with her. When they were rounded up, one of the piggies was brought into the office for its shock value. Elaine Cramer (then the future Mrs. Chet Gunderson) painted the piggy's snout with lipstick, after which Big Joe Huserik propped it up behind a typewriter to frighten one of the secretaries.

Then the answer to my concerns came to me. I could keep busy for a while just writing a history of that company and the people who built it. Goodness knows, I had stored up enough memories about the old timers that ought to be told to the newcomers to give them "something to shoot at". Then I could compile a list of the important jobs that the company did, the research on that would take a few months. There was the need to record the exploits of the innovators whose ingenuity made the job safer, easier and more profitable–Rube Goldbergs by the dozen at Gunderson. Some of these were real characters who, after being created, "The mold was thrown away," as the saying goes. Fortunately for Gunderson they apprenticed and trained successors who carried on in their place.

It became important to record the various reasons why the business was successful albeit it had its perilous moments.

About two years before my retirement in June, 1984, I began making notes of these experiences and listings of the main projects that had been undertaken by the company. Hence, the Gunderson history, ten years later.

There is no doubt that from the time Chet Gunderson was a very young man he wanted to build his own business like his father, a carpenter-contractor had. He got his start selling newspapers on the street corners of Seattle. After he stalked out of high school when his teacher scolded him about rattling the gold coins that he carried in his pocket, school was out for him so he needed to get on with his business life. It is quite fateful that all the thousands who have been on the payroll of Gunderson were there due to a flip of a coin that brought Chet to Portland to found his business. Had he lost the flip, maybe Spokane or Seattle would have been the winner in that toss.

Later, in 1923 Chet's brother Al joined the business having himself finished his high school years.

The two brothers made a great business team.

Chet was a builder with a splendid mechanical aptitude. He did some amateur boxing and moonlighted as a bouncer in a bar. He kept himself in fine physical fit though he did not "work out" in the sense that we do today. This made him impervious to intimidation. Though he was an impeccable dresser and would pass in the richest of board rooms, he was a common man and got along well with the workmen and spoke their language. He loved his working people. He kidded them, argued with them and treated them as his equal. He loved the outdoors–hunting and boating. He was proud of his 65 foot yacht, "The Geebee", which he shared with his brother Al. They took turns taking the boat up through the Straits of Juan De Fuca and on through the inside passage along the West Coast of Canada.

Al was not mechanically apt like his brother. But, he understood salesmanship. He was an aggressive and persuasive super-salesman. He was persistent, never gave up on a problem until every stone was overturned. Like Chet, he was well groomed. He was more gregarious than his brother. He socialized with his fellow industrialist friends and enjoyed golfing with them. Many were his brokers, customers and lawyers. He was a joiner, a mover and a shaker. He gave of his time and talent in civic affairs. He loved boating, hunting and fishing.

When it came to financial matters both of the brothers, as a team, seemed to be wizards at convincing bankers of their need for money while at the same time securing the best installment payments from their customers and the longest terms of payment from their suppliers. This wasn't always true. They nearly went bankrupt in the late thirties as the reader will see. Were it not for the grace of Ard Ady, an officer of the United States National Bank, who thought Gunderson had a future and who didn't want to put 40 or 50 hard working and conscientious people out of work, Gunderson easily could have been forced into bankruptcy and closed for good. First he convinced his boss, Paul Dick, the bank president, then five other major creditors, all of whom were for foreclosure, that there was a good chance they would receive all of their money and new business as well if they were patient. The bank was first in line and the creditors might lose everything otherwise. He was right, as witness the "Hungry Giant" which exists today.

The talent of the brothers aside, the real builders of the company, I think, were the department managers and workers who knew how to do things and get things done, and who could motivate those who worked for them. Gunderson was blessed with good managers. They brought out the best in the working people and trained them properly to work efficiently and safely.

There were the engineers and draftsmen whose knowledge of transportation equipment, bridge building, tank and pressure vessel construction, shipbuilding and finally railcar building enabled Gunderson to compete in those fields. The engineers were the company's resource of precise knowledge. They gave the company its dignity and credibility as an "engineering corporation" in the manufacture of its diversified line of equipment. They designed and installed the production lines, eliminated unnecessary motions and eased the lifting burden of the work force. They undertook difficult projects often beyond or at least at the leading edge of "the state of the art", some of which, if they had not been successful, would have pushed the company over the brink. The unsuccessful Chevron tanker project very nearly caused FMC Corporation to close down Gunderson for good. After that fiasco FMC became gun-shy of the marine business and forbade shipbuilding of any kind for a few years.

No less vital to Gunderson's success were the skills of the men and women who knew how to lay out and work the metal so that the myriad's of abstractly shaped pieces could be fitted and welded together like a three dimensional jigsaw puzzle into the final product.

They were the loftsmen who made the templates and patterns, much the same as those used by a tailor when cutting out the cloth for making a dress or suit, except that our "dresses" were welded and bolted steel bulkheads, bow and stern sections, keels, bridge girders, railcar centersills and countless brackets, braces and gussets.

They were the burners, and shear and pressbrake operators who cut the steel plates and shapes to match the templates, patterns and sizes called out on the blueprints. In recent years the burning machines were able to burn out several identical pieces at the same time made possible by a tracing device which followed the contrast line between black and white on a pattern. One time a burner noticed that the torches were wandering off line. He spied the electric eye following a fly which had landed on the pattern line and the eye had followed the fly's walk. The narrator of this story swears it's true, though maybe it's another "left handed monkey wrench" ruse.

They were the welders and fitters who clamped the loose pieces together while they welded them, always adhering to the dimensions of the greater plan. They used giant welding positioners which suspended the structures and rotated them so that the welding always could be performed in the downhand mode. They and the engineers developed huge gantries that rolled on steel rails and straddled the long plates that were being welded together longitudinally. Several automatic welding machines were suspended from the gantries and as many seams as there were welders were laid down simultaneously and rapidly.

They were the grinders whose job it was to grind the welds and jagged steel edges down to a smooth and fair finish, being careful not to over-grind jeopardizing the weld. Their work left the steel as smooth as skin.

They were the machinists. They drilled and bored the holes in the material. They planed the edges and surfaces of the steel plates and turned the round bars when a fine finish like the back of a watch was needed. They made all of the special bolts and nuts dreamed up by the engineers and draftsmen. They machined the roughness off of castings from all kinds of metal. Out of a mix of steel bars, bolts, castings, gaskets, nuts and tubing they made air and hydraulically operated cylinders.

They were the riggers and material handlers. They knew how to handle and move the material from one station to the next. They often had cumbersome, unbalanced loads which were dangerous to haul. They had to be very careful in the process. The crane operators, sitting in their cabs high above the ground needed keen vision and reflexes and

a light touch on the controls so the big loads hanging from the boom would move stably and unjerkingly. Sometimes, as in the case of the large tanker modules, it was necessary to make small scale models of them and simulate their lifts to determine all the motions needed for a safe lift.

They were the painters. They had the least amount of time to do their job. When the job was turned over to them it was usually overdue. They worked inside and outside in all kinds of weather, through the night and weekends, to meet the deadline. Each customer of the scores of ship and railcar orders required a rainbow of colors, and his own name stencil. The weight and numbers for every car differed and were custom-lettered. The painters were expected to apply the paint to a uniform thickness, dust free and impart a mirror finish to it. They did. If they didn't, they had to do it all over again. After a shift of painting, the coating on their clothes and masks was heavier than that of the finished surface. Their environment was explosive and hazardous, they had to be careful.

They were the electricians and maintenance people. They repaired the equipment and kept it running. They were available around the clock for any event that might stop or slow down production. They could fix nearly any motor, pump, tool or machine in the plant. They respected the alive, deadly electrical circuits that wound through the plant from the big transformers down to the various motors in the machines. Many's the cold freezing night they crawled out of a warm bed and went down to the plant to thaw out pipes or fix broken machinery.

They were the tool room attendants. They kept track of thousands of tools–who was using them and where they were. They stocked millions of bolts, nuts, screws, fittings, brushes, grinding wheels and welding rods. Their job was to see that not a minute was lost for lack of any of these things. They too, like Ron Brown, watched for kinks in fire hoses or faults in the tools trying to prevent injury to any person.

They were the sweepers and clean-up crew. The most unsung of all, but the most obviously noticed if the house wasn't kept clean.

They were the quality control specialists whose job it was to make sure the customer's details were followed and that Gunderson's product was of the highest quality. They were not popular and "were not here to make friends", as one MRED ad portrayed a quality control manager, Butch Hunter.

They were the accountants and clerks. They kept track of the inventory, totaled up the costs of each job, billed it out, collected the money, paid the bills , balanced the books, wrote the thousands of pieces of paper information necessary for the all systems to function. They were the unsung. They didn't make the speeches, but they had the vital answers as to where the job progress stood and blew the whistle the moment the numbers began to sour.

They were the computer technicians who designed and implemented the countless systems that calculated, displayed, tabulated and published information at speeds far beyond manual capability. They bore the brunt of good and bad natured needling before their systems were debugged but had the last laugh when the systems were go.

They were the personnel department people. Today it's called, "Human Resources". They kept track of the hours, health and welfare of the hundreds of workers that came and went. They paid the employees on time and each week. They monitored the work force's activity to minimize absenteeism, tardiness or problems of any kind. They fostered training programs. They concerned themselves with the safety of the work place, and constantly promoted safe working practices.

They were the buyers. They priced the material for the bids to customers, and bought it when the jobs came in. They bought the ten thousand varieties of equipment, gadgets,

supplies, wires and widgets. The most frequently used delivery word was "rush".

And the salesmen. They called on the customers, entertained them, cultivated their friendship. They pursued every avenue and angle to keep a full backlog on the books. Once the customer's inquiry was in for a quote they were never quite satisfied that the labor or material costs furnished by the bidding departments were low enough. Once the bid was sent out, the sales department camped on the customer's doorstep until the job was awarded.

Leaving the most important to the last, there were the secretaries and typists, the most taken-for-granted class of worker. With notebook and pad, they listened to the crudest, most tedious and vaguest of spoken jargon and translated it into written pages that were brief, clear and precise.

Forgive the author if he left anyone out and unsung!

What brought all of these arts together as a whole and made the company successful? It was a sort of patriotism, like what a group of people feel for their country. They are proud of it and would fight for it. Gunderson's people were like that. Though they would get upset at the company at times, their solidarity was the glue that held everyone together.

The spirit of "Can Do" was, and is, a characteristic of Gunderson employees. Under the most adverse of conditions, a way was found to achieve success or cut the losses. Another word, coined during a safety drive, "Stick-to-it-ive-ness," did and does describe the Gunderson worker.

Many examples of that "Can Do" spirit are given in this history. Many of them still stand and can be seen as one drives about the Western States: The Port of Portland Drydock, the buildings of the Federal Reserve, Oregonian, and Portland State University, the Canby Overcrossing, the approaches to the Marquam and Morrison- Hawthorne Bridges, dozens of steel bridges, the gates of McNary and Big Cliff Dams, The Wahluke Siphon, the Parkrose Water Tower, the FLIP, the dump scows of Umpqua and Smith-Rice, five Chevron tankers and several hundred barges. And I believe there's hardly a train anywhere in the U. S. A. or Canada that isn't pulling or hasn't pulled a Gunderson railcar or soon a Husky-Stack. Even giantess Portlandia, the exquisite copper lady by Raymond Kashe, displays the keen talent of Gunderson artisans.

After Al and Chet died, the growth didn't die with them. Other leaders took their place at the helm of the company. C. Bruce Ward, Charles H. Johnson and John H. Carroll, Jr. managed the company, in that order. Then FMC Corporation decided to sell the company during a recessionary period. In March, 1985, Ward and Greenbrier Leasing Company's William A. "Bill" Furman and Alan James bought the Marine & Rail Equipment Division from FMC. Ward's account of this purchase is intriguing. The company's name was changed back to Gunderson Inc. In 1990, Ward became Chairman of the Board and Furman became its President and served until early September, 1990 when L. Clark Wood, its current President, was appointed to the job. Ward sold his interest in Gunderson Inc. December 1990 but, though semi-retired, still serves as Chairman of the Board of Gunderson Inc.

Almost ten years have passed since the idea of writing this history occurred to me. This labor of love has made my retirement enjoyable, productive and stimulating. There is no longer any doubt as to the future. Other projects await the finish of this, any one of which I know I will enjoy learning to do and doing. But it's always a thrill to get in my car and drive up over the west hills from my home and down to the river to my old place of work.

No matter how much the company has changed, it's still the same. Most of the same buildings are there. The marvels of its steel men and women can be seen throughout – the pride of good workmanship overflows there. Good fellowship abounds. The loyal and eager strive for their own turn to manage the future. Even the old Gunderson Bros. Engineering Corp. sign still wants to be seen as it bleeds through the overcoats of paint on the morning side of the old plant.

— At Your Service —

Chapter 1

Alvin E. Gunderson

Alvin E. "Al" Gunderson was born April 10, 1904 in Seattle, Washington. His parents were Nelson A. "Nels" and Hannah Gunderson. He was the brother of Chester E. Gunderson and Mrs. James (Agnes) Temple of Seattle.

He and his first wife, Helen, were divorced. They had one child, a son, Robert E. Gunderson.

At age 19, Al worked briefly as a clerk with the James Henry Company in Seattle.

It is not known if Al received more than a high school education. In discussing college with his father, Al said he wanted to join a fraternity. His father said he would not send him to college to play, and that was the end of the discussion.

Al came to Portland in 1923 and became Secretary and Treasurer and a junior partner with Chester E. "Chet" Gunderson in the firm, Wire Wheel Sales and Service, founded by Chet in 1919 and incorporated in 1921. This would make Al 19 when he entered the business, and thus would rule out education beyond the high school level.

Ms. Elaine (Gunderson) Olsen, Chet Gunderson's widow, told me that, when Chet decided to get out of his electrical contracting business and go into the wheel, rim and fabricating business, Chet's father admonished him to take his brother Al into the business as a partner as soon as he could. He told Chet, "Sooner or later, you will want to take some time off and you'll want someone there that you can trust." That's how Al became a partner in Wire Wheel Sales and Service. At the time Chet acted on his father's advice, Al was working in a meat packing house.

In 1925 the firm's name was changed to Wheel & Rim Service, Inc. Later the name was further changed to Gunderson Bros. Investment Co. In 1935 Al's title in the company was Vice President and Secretary, a title he held until 1965.

In 1938 the firm Gunderson Bros. was formed, and on May 29, 1942, the firm was incorporated as Gunderson Bros. Engineering Corporation.

With his brother, Al was co-owner of the Eugene Hotel and the Gunderson Bros. Equipment Division and other enterprises in Eugene, Oregon. They helped found and became stockholders of a bank in Eugene. The two also owned and leased buildings in Eugene to the Graybar Electric Co. and the Big Y Market.

At one time they owned land and/or buildings in Oakridge, Oregon and Seattle, Washington. During their early years in business, they leased a building in Spokane for sales distribution out of their Portland office.

Al supplied the sales and marketing force

Al supplied the sales and marketing force of his company, while his brother Chet was the builder.

Al was gregarious. He made the most of his business contacts. His social and business activities brought him friendships and contacts with building contractors, shipyard magnates like Henry J. and Edgar Kaiser, and railroad executives. He had a gift for connecting with people who could get business for Gunderson.

I can recall how Al loved to play gin rummy. It just so happened that many of his customer friends played "gin" as well. Of equal importance, the top executives amongst our steel suppliers also sat in as well. This meant Al was clued in to most of the good jobs that came along. It also meant that, when we needed steel and I didn't have enough clout, he gave that extra little shove and we'd have the steel.

The V-Bottom speed boat

In his endless search for that "milking machine" with which to make money, Al was willing to develop any product that had promise. Thus was the case of the V-bottom speed boat.

In 1947, someone came to Al with a speed boat design, to be made out of waterproof plywood, and wanted ten or twelve built. According to Larry Preuss, Construction Engineer for Gunderson Bros. at the time, the boat was about 12 to 16 feet long and about 6 feet wide.

A V-shaped tunnel ran lengthwise and centrally through the bottom of the boat's hull except at the bow. The bottom side of the tunnel was open to the water. From the aft end, this gave the boat the appearance of a catamaran, which is a boat with twin hulls. About four feet from the bow, a pipe which was connected to the forward end of the tunnel, emerged vertically through the bow-deck and elbowed toward the front of the boat. This served as an air scoop. When the boat attained the correct speed, the high velocity air, entering the tunnel through the scoop, built up enough pressure in the tunnel to force the boat to rise in the water and plane, or skim over the waves.

Al Gunderson gave one of the boats to his son, Bob, on or near his 16th birthday. Bob was born in 1931, which would verify 1947 as the date for these boats. Bob worked in the Gunderson tool room at the time. Mike Illias, a former Gunderson purchasing agent, recalled that when Bob got his boat, the two of them took it out on the Willamette River during lunch hours.

According to Preuss, the boat required a 30 horsepower outboard motor to propel it fast enough to make it plane, as it was supposed to, "But that size motor was more than the average guy could afford. The boat was not much good for trolling, as it was designed to be a speed boat for water skiing."

The expensive motor was probably the reason that only ten or twelve boats were produced. Or, like some other Gunderson ventures, they may not have been able to price the boat low enough to make it marketable. The answer is not known.

Everett Hill, retired Gunderson Electrical and Maintenance Superintendent, described his experience in the boat:

"We were on the water going fast. I didn't believe that the tunnel that goes through the hull would do any good – so I threw my coat over its intake. When I did this, it was like 'putting the brakes on' on a car. It about threw me over the front end – so I knew the 'air scoop' really worked. When I removed my coat, the boat started to plane again.

"I thought it would make a good family boat, because of the flat bottom. When you got in it, it didn't feel like it would roll over.

"I believe is was called the 'Brush' boat. I think he was the designer as well as the buyer."

From job , shop to mass production

A good example of how Al's connections paid off was Al's friend, Carl Evers, District Traffic Manager of Union Pacific Railroad. Evers helped Gunderson to obtain a special

freight rate and tariff that covered steel underframes from Portland to California. This favorable event was the key to entry into railcar building business.

Entry into the car building business catapulted Gunderson from a job shop status to a giant manufacturing plant.

Though it has changed hands, Gunderson now prides itself as being the fourth largest railcar builder in the United States.

Persistence won

Al was persistent. When I was having a tough time obtaining some hard-to-get material, Al said, "Don't give up, the squeaky wheel gets the grease." Later, on many occasions, I used that same philosophy on Al to get raises in pay and a few "perks".

He hated to lose an order. He would pull every available string until every avenue had been pursued. Yet, once an unusually low bid was won, Al would worry and wonder what material or labor item had been left out.

He worried endlessly. Each day as the suppliers' invoices for goods and services crossed his desk, he sorted out those which he couldn't identify and ran them across my desk with a roughly scribbled message, "What's this? See me, Al!" Of particular suspicion were the invoices for toasters, waffle irons and T. V. sets and supplies for the farm ordered for Chet and for Al's son Bobby. Once the account number was squared away, everything went back to normal.

A generous man

He was a generous man. While I was still a relatively new employee, I had only been there a few months when I was arrested and put in jail following an automobile accident.

Al Gunderson came to the jail the next morning after the wreck, offered his hand shake and said, "Don't worry, Benny, Chet and I will see you through this trouble." And the brothers did. Their attorney defended me, the brothers paid off a judgment against me and allowed me to repay the money at so much a month from my salary at any amount I chose.

Several times, the brothers "bailed out" other employees who got in trouble one way or another.

Like his brother Chet, Al dressed impeccably, although not quite as conservatively as did Chet.

He had a wonderful singing voice. At parties, he would perform several opera arias to the delight of all present.

After the FMC Corporation purchased the Gunderson operations in 1965, C. E. Gunderson, President and General Manager, retired and was replaced by Al. Al held the title until 1967 when he also retired and was replaced by C. Bruce Ward.

Mirth is king!

Al held memberships in the Masonic Lodge, the Al Kader Shrine, Multnomah Athletic Club, Waverly Country Club and the Arlington Club. He enjoyed golf and fishing.

He and his brother shared a boat, named "Geebee". He enjoyed taking trips up the Pacific Coast to the San Juan Island waters and the Inland passage along the coast of Canada. He and his wife usually had friends aboard for the trip. A letter to Edgar Kaiser in 1949 said, "We'll go up to Malibu then over to Campbell River and Orcas Island."

Attesting somewhat to his thrift, he wrote a letter September 13, 1949 to the Royal Vancouver Yacht Club in Vancouver , B. C., Canada:

"During the early part of August when the Yacht GEE BEE III was at your yacht club, we sent out considerable laundry and dry cleaning. The laundry was returned but the dry cleaning was never returned to the boat. This consisted of two pair of slacks, a heavy tan plaid wool shirt, and a ladies red sport coat with gold buttons."

"A friend of ours, Mr. C. H. Hirschbuhl, (President of Monarch Forge & Machine Works) will be in Vancouver the latter part of this week and we have asked that he get in touch with you to find out the name of the laundry so that he could pick up the clothing involved and bring same back to Portland. Anything you can do to assist Mr. Hirschbuhl in locating the missing clothing will be greatly appreciated."

I imagine, due to his persistence, the clothing was located and brought back to Portland by his friend Charlie Hurshchbuhl.

He was active in the Shrine. A letter to Al from Fred N. Bay, (The Magazine Man) regarding a junket to Spokane, apparently by train, read:

"Dear Al:
"The Charge, sire!
"The Charge.
"$43.43
"Attire – Tux – jewel and beret
"If you have no beret, contact Tommy Luke (owner of Flowers by Tommy Luke)
"If you have no jewel, contact Harvey Wells
Mirth is King!
Signed, Fred N. Bay, Chairman
Jester Pilgrimage
"May I have your check immediately
(Handwritten:) "Is your arm twisted enough
F."

The trip to Spokane, by train was 9-1/2 hours. They left at 9:30 P.M. and arrived there 7:00 A.M. the next morning. The trip home took 10 hours, also overnight.

Of the two brothers, Al was the more political in nature. He was Gunderson's representative in news articles and media relations. He was a member of the Portland Dock Commission during the late 1940s and early 1950s. Chet did not seek the "limelight". Usually, he remained very much in the background when it came to public relations.

Al was active in several civic affairs, including Community Chest, Red Cross and War bond drives. He was generous with his personal and corporate contributions to worthy causes. After providing for his surviving spouse, Jane, he bequeathed approximately one-half of the net of his estimated $9 million estate to St. Vincent Medical Foundation, Good Samaritan Hospital and Medical Research Foundation, all of Portland, divided equally.

Al's long-term dream fails to materialize

During his last years, Al was about to realize a long-term dream, that of appointing his son, Robert E. Gunderson, his successor as president of the company. He had been grooming Robert for the job ever since Robert became a permanent employee in 1952. But Robert perished in a plane accident on January 19, 1967. Al was never the same from that point on. He developed a reliance on alcohol and his health went steadily downhill.

Al died in a Portland hospital on July 31, 1972. Generally, he had been incapacitated, hospitalized and comatose over lengthy periods of time from 1969 to 1971.

According to the *Oregon Journal*, December 30, 1980, his will was contested by four grandchildren, adopted by Robert and his wife Saundra. They were left nothing in his last will, dated Dec. 13, 1971. It is not known if the suit resulted in a change of the will or a settlement out of court.

His second wife was the former Jane Mays Korter. There were no children from this marriage. Jane survived Al but died a few years after Al's death. At one time, her son, Bruce Korter, was an employee in the purchasing department of Gunderson. As of this writing, he is currently Vice President and Senior Marketing Consultant for the real estate firm, Grubb & Ellis.

Al was also survived by four adopted grandchildren whose parents were Robert E. and Saundra Gunderson. The names of the grandchildren were Marquam, Cornelia, Brent and Helena.

Bruce Korter found, among Al's personal effects, a bound copy of the *Gunderson Gunner* and a framed architect's rendition of the original manufacturing building at 4700 N. W. Front Avenue.

Chapter 2

Chester E. "Chet" Gunderson

This is a portrait of Chet as seen through the eyes of Eddie Leo, Chet's former houseboy. Later in this chapter, I'll add a few of my own remembrances of Chet.

Eddie Leo's years as Chet's houseboy

Eddie first learned about the firm, Gunderson Bros., at age 16. His 15 year old brother, Herb, applied for work as Chet's houseboy aboard a boat-house that Chet built in 1942. The boat-house was moored at Gunderson's boat basin on the Willamette River, just below the newly-built Front Avenue plant.

Herb was not hired because he was too young, so he suggested to his one-year-older brother that he apply for the job. So Eddie did, and was promptly hired by Frank Ellison, skipper of Chet's boat and a rigging expert in the lifeboat works. Chet was out of town at the time and didn't know he had a houseboy until he came home.

Chet liked Eddie, all 4'10" and 81 pounds of him, so he was affirmed on the spot. Eddie became an aide to Chet on the boat-house and cruiser on the Willamette river below the big Front Avenue plant. He also became a long term friend.

Eddie began his new job a few days before September 11, 1944 which was the date of Eddie's Coast Guard pass that he was required to obtain. Every employee needed a United States Coast Guard pass before they could enter any defense plant on the waterfront. Fingerprints were taken, forms were filled out, and investigations were made before a pass was issued.

Eddie was just a "green hand" in the beginning. He had to take several "crash" courses before learning how to perform his duties. He had lessons from Frank Ellison on preparing beverages for guests and on house-cleaning from Eva Pautz. Eva was Ernie Pautz's wife. Ernie was Parts Warehouse and Shipping Manager. Ernie and Eva moonlighted as company janitors.

Chet's respect for people of all walks of life was demonstrated when, during the first meal that Eddie cooked, Chet asked him where he was going to eat. The answer was, "In the kitchen," whereupon Chet settled the issue, "From now on you'll be sitting at our table." And that's the way it was whether at home or at a fine restaurant, anywhere in the world when he was with them, unless there was a full house and he was too busy with the details of helping wait on the guests of Chet and Elaine, his wife. Elaine taught Eddie how to drive. He was so short that Chet had a special cushion made, so that he was comfortable without sacrificing room for Chet and Elaine.

As a chauffeur he was required to fulfill a tight schedule. One time the Gundersons were flying into Los Angeles from somewhere but they needed a car when they got there. To be punctual and despite a bad case of the flu, Eddie drove straight through from Portland to Los Angeles in order to meet them when they arrived, chauffeur them around the city, and then come back home.

On a different trip to Mexico, where it was customary for executives to hire a Mexican chauffeur, Chet hired a chauffeur alright, but had Eddie chauffeur the chauffeur.

Chet admonished Eddie to have the car in a certain city at a certain time. Eddie would say, "But what if I get sick?" Chet would warn, "You'd better not." So it was thus that Eddie, like

all of us who worked for Chet, respected his deadlines and developed a sense of urgency in all of our activities.

According to Leighton Johnson, an associate covered elsewhere in these writings, "Whenever Chet called from the boathouse, whoever it was had to drop what they were about and hike down to see Chet. You probably had that happen to you." I sure did.

Chet made it clear to Eddie that he was an equal. Soon after he came aboard, Chet ordered, "Wherever we go I want you to look your very best." So Chet gave Eddie the name of his own tailor, Reed Brothers, and told him to go there and have some suits made, get shirts, shoes and all the accessories he needed. All he had to do was sign the bill. The suits were expensive, and had the same, beautiful quality and tailoring to which Chet was accustomed.

Chet's wearing apparel was elegant and conservative–what one might expect a board chairman to wear. His suits tended toward plain or very faintly patterned navy blues, grays, and browns; some had subdued pin stripes, never loud plaids. He always wore a smart, medium brim, felt hat that matched his suits.

His business shoes were mainly a solid black or brown straight tip bal, and were highly polished. Eddie said that there were dozens of pairs of shoes–so many that they took up the whole length of the clothes closet–and he had to keep them all polished.

Chet's ties were tasteful and beautiful, silk, Countess Mara. He allowed Eddie to use any of them any time he needed one. Some times he would give a whole handful of his barely used ties to me. My friends wondered how I could afford the Countess's ties.

There were some harrowing experiences for Eddie on the boat-house. In 1948 a 70-miles-per-hour gale blew the structure from its moorings. Elaine was not home at the time.

Chet saw the moorings let go, warned Eddie, and scrambled off the boat-house onto the roof of his covered walkway. Eddie was not quick enough and had to ride the building downstream until the wind, fortunately for all, blew it into a neighbor's moorage. Big Joe Huserik said he had a line on the house to hold it where it was, but the line broke. The floating home was saved by an alert dock hand who collared it and secured it to the dock moorings, otherwise it may have broken loose again and smashed against the railroad bridge at Willbridge.

Eddie said that Chet had "the Midas touch". Chet was not only busy with those interests bearing the Gunderson name. He was involved in several other ventures aside from the Gunderson enterprises. He was a large stockholder in Signal Oil Company and West Coast Airlines.

With his brother Al, he was also a founding stockholder of Citizens Bank in Eugene, Oregon. Another business was the Eugene Hotel. He was President of the hotel.

Not many of his ventures failed but his failure to venture in one haunted him for years. The inventor of the enormously successful Phillips Head wood screw, wanted Chet to invest several hundred dollars to help manufacture and market the screw in return for a substantial interest in the business. Chet did not invest, but the Phillips Screw became a standard fastener for the automotive, durable goods and other industries. Billions of the screws have been used since their development. When he talked about it he said he could kick himself but still laughed about it.

Referring to Chet's Midas touch Eddie said, "Chet's biggest coup was to marry Elaine, a union which everyone thought would not last – even made bets. I was one of them. Turned out to be the best wife anyone could ask for. She was as wonderful to me as he was."

When Chet retired from his company after selling his interest, he told me that he was fortunate to have Elaine at his side; she was a devoted wife and a stabilizing force in his life. She was influential in keeping him "on an even keel" when he had so many problems and

projects on his mind. I surmise that she probably had many trying times when his patience was thin, but the proof of her efforts came out in his praise for her.

Although he often appeared to be impatient and in a hurry, there was a kind and generous person inside of Chet's sometimes tough-seeming exterior sheen.

Several years after having left Chet's employ, Eddie encountered some problems and came to Chet for help as a character witness. Eddie recalled, "When asked if he would still trust me, Chet's immediate reply was–I'll never forget it, 'I would trust him with my life.'" To carry out his pledge, Chet hired him back again to work in the shipping department at Front Avenue. Eddie worked for a year until he was laid off along with many other workers when the company was sold to FMC Corporation in 1965.

I was fortunate to be able to meet with Eddie several times and reminisce with him about Chet. I regret he will not be able to read this account because he died from a terminal illness in about 1990.

Chet's generosity

Chet seemed to be a leaning post for many of his friends. One, whom we knew, would occasionally come to town, put on a big show of success, glad-hand everyone in the office, borrow a "hundred or two" from Chet then disappear again.

In 1949, another friend in Bern, Switzerland, in a warm letter to Chet, asked for a loan of $200 to "solve all his problems relating to an accident." Chet wrote him a nice but firm letter sending the money, and said, "I will expect a letter from you each month starting in January." Kiddingly, Chet asked his friend, "Was it an automobile accident or were you skiing? Or maybe jumping out somebody else's window?"

His generosity reached its apex when his long-time and faithful friend, Otto Runte, needed help and a place to live. Chet put him up in "The Booby Hatch", the little guest apartment in the second story of the garage at the head of the covered walkway leading down to the river where Chet's boat-house was. Otto lived out most of the rest of his life there.

Friends from every walk of life

Chet accumulated a lot of celebrity friends including movie stars and famous air pilots. Some of these put in appearances at the Linnton plant. Out of respect for Elaine's wishes, I omitted their names.

On one occasion I was hard at work at my desk in the big front office at the Linnton plant. The front door opened and in stepped Chet with a man whom I assumed was a business client. As they stood there chatting by the front door, a voice, clearly coming from the tool room behind me, cried out in a distressful tone, "Benny.....Benny! Help! There's trouble out here!!!!"

I jumped out of my skin and ran through the door to find out what the trouble was. Nothing seemed amiss. Everyone was at work and everything was normal. I came back into the office and returned to my tasks. Meanwhile, Chet and his guest were still at the door in solemn conversation.

Again, a blood curdling shriek pierced through the walls from the tool room, "Benneeeeee! Get out here in a hurry!" Once more, rushing to the rescue, I found everything quiet and normal.

Totally shocked and confused, I returned from the tool room and, this time, Chet and his accomplice were breaking up in laughter. Chet then introduced his friend who turned out to be a very good ventriloquist.

On another occasion Chet brought in a magician friend whose favorite trick was to ask a person if he had a silver dollar. When the coin was produced, he pulled a dollar bill out of his own pocket, palmed a thumb tack into the bill, then using the coin as a weight, tossed both pieces of money to the ceiling where the bill stuck fast and the silver dollar fell back into his hands.

He then pocketed the silver dollar, said it was an even trade and exited the scene. I had to get a stepladder to retrieve my dollar. I later wondered if he was collecting silver.

Chet collected some friends who were not celebrities. They were just good handymen like Frank "Shorty" Heikkila, a Finnish-American who spoke in a rapid staccato. And Johnny Herder. These two were "Jacks of all Trades" and did odd jobs of all sorts. They would repair Chet's boat hull, fix and build wood cabinets and make repairs to any part of the plant or boat-house.

During the thirties and forties, Shorty, an excellent cabinet maker, had his own small shop on Lombard street. He was also on call by Bill Steele, Manager of Richfield Oil Company, to handle the hoses when the oil tankers unloaded fuel at the Richfield docks next door to the Linnton plant. This may be where Chet learned of Shorty's skills and his availability to do any odd jobs that needed to be done.

Shorty performed carpentry work for Chet at the Linnton plant, such as building bins, shelves and general remodeling.

I got to know Shorty quite well. Well enough that on September 7, 1939, my wedding day, when the Gunderson payroll checks were late, he loaned me $15 for a week-end honeymoon at the beach.

He was such an unusual person, I can visualize the reason Chet was fond of him.

He puffed and chewed on a cigar constantly. As a cabinet maker his eye-glasses were always covered with sawdust whenever I saw him. He enjoyed calling me a "country hick" because I was so dumb when it came to cabinetry or any other subject involving a bit of mechanical skill. One of his favorite questions, after setting a hayseed straight on a certain matter, was, "Get the point, you dumb farmer?" But, he was a lovable and honest man and a man who would give you the shirt off his back if you needed it.

No time out for sickness

Chet did not have much time or need for doctors. Maybe he just didn't want to take the time to see one. On one occasion he had a painful back strain. When he was asked what he had taken for it, he said he never took medicine for pain. He said pain, to him, was pleasurable; it made him appreciate how wonderful wellness felt.

On another occasion I was amused, that with all his money, he was pleased that he had found a pair of eye glasses to suit him at Fred Meyer's, for only $10. They helped him "to see better than any prescription glasses that he had ever worn." He even sold his brother Al on the idea of getting some reading glasses at Freddie's. It wasn't a question of money. It was the convenience of getting the glasses "now", rather than sitting in some doctor's office, and waiting a week or two for them.

Chet's farm and final days at scappoose

During the late 1940's, in anticipation of retirement, but long before the actual event, Chet built a home on 44 acres in the country near Scappoose, Oregon.

For his hobby of raising cattle, he fenced off two pastures. The two corrals gave the cattle plenty of room to forage. When one pasture was gleaned, the cattle could be moved into the

adjacent one which was lush with feed. The depleted one lay fallow for a while to replenish itself.

He also had a sizeable cherry orchard near the river front.

The herd of cattle was complete with a prize bull, named Willie. He was a gift to Elaine from Chet. Willie was quite a celebrity and he was kept very busy. I recall seeing a portrait of Willie in Bart Woodyard's restaurant up on 19th and Burnside. Chet had Willie vaccinated by Dr. C. R. Howath, Veterinarian, In August, 1949.

The Zimbidiums

Chet built a very special garden for Elaine and her mother, who was a good gardener. So they could tend to their plants without stooping, he had the carpenters build waist-high rows using masonry retainer walls filled with top soil.

He also built a green house for culturing Zimbidiums, a form of orchid. The ladies at the office were ecstatic when he brought a bouquet of orchids into the office from Scappoose.

"Big Joe" Huserik, one of Chet's favorite carpenters and later Gunderson's carpenter foreman, built a barn, chicken house, and runs for peacocks and pheasants. Chet wanted a concrete hog pen floor and trough, all made in one pour, so Joe made that too.

The main home was built without windows but had an elaborate air conditioning system which would remove all dust and other particles from the air. Then there was another house built as a recreation center for the Gundersons and their guests. This house contained a large room with a fireplace, pool table and plenty of wall space for display of guns and trophies. There was a large bar, a kitchen dinette and bedrooms for guests. Still a third house, of similar brick construction was built for the caretakers to live in. For many years Pete Gonzales, a former Gunderson paint shop foreman, and his wife were the caretakers of the place.

Larry Preuss, a construction engineer with Gunderson for many years until the mid-60's and of whom Chet had the highest regard, supervised construction of several of the Scappoose property's buildings, mainly the residence and the recreation center previously mentioned. Preuss referred to it as "the gun club".

The duck blinds

One of Chet's fondest pastimes, other than sailing on water, was bird hunting. There was a duck club near his Scappoose home where he and close friends spent many happy hours in the blinds, bone chilly, in good fellowship, shotguns ready, dogs impatient, waiting for a few birds to descend into the fresh water marshes. In August, 1949 there was an invoice for 25 cases of dog food, enough to last for a while.

Chet's brother Al and his friends made good use of the duck blind. So did Al's son Bob.

Until the day of his retirement when he sold his business, Chet had presided over all of the Gunderson enterprises. From his original newspaper boxes, and his small electrical business to the huge railcar and shipbuilding plant he maintained continuous, personal control. His companies provided employment for thousands of people, most of whom loved, respected and "rapped" with him.

Chet passed away on May 27, 1974.

His last rites were held at the Columbia Funeral Chapel in St. Helens, Oregon, close to his beloved Scappoose ranch.

Surviving him were his wife, Elaine; daughter, Betty; sister, Agnes Temple; three grandchildren and two great, great grandchildren. Many loving friends were there to see him "cross the bar".

On Chet's funeral program one of Alfred, Lord Tennyson's poems said a farewell the way Chet would have liked to hear it:

"Sunset and evening star,
And one clear call for me!
And may there be no moaning of the bar–
when I put out to sea.
For though from out–our bourne of time and place
The flood may bear me far
I hope to see my Pilot face to face
When I have crossed the bar."

A great man with a great heart left our midst. He once said that he was proud that he had been a newspaper boy. Just possibly, he was more proud of the giant enterprise he created. Through the years his creation gave the livelihood to thousands. To some, like me, his company was their entire career. But Chet was not the type of man who would boast of such a thing.

— Wheel & Rim Rolls Into The 1930's —

Chapter 3

The founding of Gunderson Bros.

Chester Ellsworth (Chet) Gunderson was born in Seattle, Washington on September 7, 1894. His parents were immigrants from Sweden.

Saundra N. Gunderson, widow of Robert E. Gunderson who was Alvin E. Gunderson's son, writes of Robert's grandfather, father of Chester E., Alvin E. and their sister Agnes:

"Robert's grandfather Nelson A. Gunderson was a master carpenter from Malmo, Sweden. He was shipwrecked off the Washington Coast in the early 1880's while immigrating to the United States.

"His precious handmade tools and hand carved wood case went down with the ship and he came ashore with only the clothes on his back to find refuge at a sailor's mission in Seattle.

"He put his carpentry experience to work and soon gained a sound reputation for his old world skills. He was involved in the construction of bridges and commercial buildings in the area (Seattle) as well as residences, finding time to build the family home on Broadway, N. E. for his bride, Hannah."

(Actually the home listed in the City of Seattle directory was at 1006 S. 11th in 1892. Subsequently it was 2320 11th. Ave. N. then 2412 N. Broadway beginning in 1922. Nelson A. Gunderson's name first appeared as a contractor. In subsequent years he was listed variously as a railroad contractor, contractor and builder, bridge builder, and carpenter.)

The Gunderson Family

"My understanding was that she, too, was Swedish and that they met through the growing network of Scandinavians who immigrated to the State of Washington during the latter half of the nineteenth century.

"Their three children were born in this home, and after their parents' deaths, the eldest of the three, Agnes Gunderson Temple, resided there with her husband throughout their lives.

"Gus (Nelson) Gunderson had no formal office and conducted his business out of a saloon and pool hall located near the family home.

"All three children attended the same elementary and high schools near their home on Broadway Street, but Alvin Ernest (Al), the youngest, was the only one who showed interest in attending the University of Washington. Unfortunately, when Al announced that he not only wanted to go to college but wanted to move into a fraternity house as well, his father took exception, telling him that if the family home was not good enough for him, he was welcome to leave it for good.

"I believe that he did leave home at this time or shortly thereafter but am not sure when he and Chet moved to Portland and opened their tire and rim shop.

"I do remember a story, however, that Al used to tell about a man who came to him and Chet in the late twenties or early thirties. It seems that this man needed $500 to produce a special screw and screw driver that he had invented. The money he needed represented a fortune at that time and, regrettably, Al and Chet couldn't help him. The

man's name was Phillips, and he obviously did find financial backing elsewhere." (He was the founder of the successful and enduring Phillips Screw Co., makers of Phillips screws, a unique metal fastener.)

Chet's gold coins

Chet's youth was spent "knocking about" from one job to another while attending school. Chet's education was limited to five years as a sophomore at Seattle's Garfield High School. This was more than ample because he had a superb intellect and was a natural entrepreneur.

Chet told of selling newspapers on street corners in Seattle while attending high school. As a newsboy, he somehow gained control of a number of street corners and installed coin-operated newspaper dispensing boxes. These enabled him to begin setting money aside for a future enterprise.

He bought some gold coins to carry around and jingle in his pocket. Chet related that, one day in class at school, he was thinking about his enterprises and jingling his coins. His teacher said, "Chet, any person who has silver in his pocket shouldn't be rattling it and disturbing folks like you do." Chet replied to the teacher's reprimand, "If you don't know the difference between the sound of gold and silver then you can't teach me anything. I've been in school long enough," and got up and left school and never returned. Chet told his grandson, Robin Plympton that he flunked his history class five times.

Chet's early enterprises

In 1914 Chet bought a motorcycle with some of his money and organized a small electrical contracting business. He had five union electricians working for him. He went around on his motorcycle soliciting house wiring jobs. This business lasted only a short time until the outbreak of World War I.

For a time during World War I in 1915, Chet performed war service by working in logging camps. He had been unable to qualify for service in the armed forces due to a shattered optic nerve, an injury received when he had been hit in one of his eyes with a baseball as a youth.

According to Stanley Stewart, an old friend and business acquaintance of Chet's, he first knew Chet in 1916 when the two of them were working as clerks in the clearing house of the Scandinavian-American Bank in Seattle. Plympton recounts that Chet was a good boxer and moonlighted nights as a bouncer in a bar. In 1917 the bank went broke forcing both Chet and Stan to seek jobs elsewhere.

Genesis of Gunderson Bros.

In 1918 Chet decided to go into the motorcycle repair business with two of his friends, B. C. R. Deaton and H. O Nygard. The 1918 City of Seattle Directory listed the partners and business as Wire Wheel Service Co., 1530 Melrose Avenue. The listing indicates that they were agents for Houk and Budge-Whithworth lines of wire wheels.

They became experts in repairing wooden-spoked auto and truck wheels and later the wire wheels. Chet has said, in the beginning, his only equipment was a spoke wrench. Elaine Olsen, formerly Chet's wife during the last years of his life, recounted that Chet and one of his former partners, believed to be Deaton because Nygard apparently retained the Seattle business, were offered the distributorship for Houk Wire Wheels of Buffalo, Pennsylvania for the Spokane, Washington and Portland, Oregon territories. They flipped a coin to decide which of the two territories each would assume. Chet won the toss for the

Portland area and in 1919 went into business in Portland. Moving from Seattle to Portland he founded a wire wheel and auto accessory store.

The founding in Portland

In a full page ad in the Sunday *Oregon Journal*, February 23, 1919, he announced the opening of his business as "Wire Wheel Sales & Service Co., 435 Stark Street – Broadway 605." (Broadway 605 was a telephone number.) A photo in the ad shows him nattily dressed in a dark suit, vest with pocket watch and chain and dark Homberg hat. He held a wire wheel in his outstretched hand. The caption read, "Houk Wire Wheels At Your Service." The ad listed the wheel's features as, "Safety, Comfort, Economy and Control." Chet's new enterprise was primarily sales and repair of wood-spoked and wire wheels. His accessories consisted mainly of wood and wire wheels, spokes for them, various bolts and nuts, brake pins, and brake lining. The 1920 City of Portland directory listed the Stark street address for the business but a footnote showed the address as a "room". It may be that the address, 108 - 13th, which shows up in the 1923 directory for the business, was the original office location, but when the ad appeared, the business address hadn't been firmed up. To support this assumption, the telephone number in the Houk wheel ad, Broadway 605 was a west-side phone number. The directory listed G. J. Powell and C. E. Gunderson with no titles. It is not known if Powell was the senior officer, since Powell's name appeared ahead of Chet's. From this operation, the firm Wire Wheel Sales & Service was incorporated on February 1, 1921. The 1921,1922 and 1923 directory listed Chet President and E. L. Crowley as Secretary-Treasurer. Crowley must have replaced G. J. Powell as a partner in the business. It is not known what happened to Powell. In the 1923 directory the business was given as 108 -13th and, perhaps growing a bit, changed again in 1924, 108 -110 13th. This was a west side Portland address near Burnside street.

Al Gunderson enters business

C. E. Gunderson, President and A. E. Gunderson, Treasurer signed their company's 1922 federal Capital Stock Tax return as of close of fiscal year ended February 1, 1921. A note in this return read, "Began business February 1, 1921." This may be taken as proof that, contrary to the information in the directory for 1922 and 1923, Chet's younger brother Al entered the business in 1921 as Treasurer then became Secretary-Treasurer in about 1924. Al apparently replaced Crowley, whose shares, if any, must have been bought out by one or both of the Gunderson's. In any case 1923 was the last year in which the directory listed Crowley as affiliated with the business. His name, however, was listed in Wheel & Rim's Accounts Payable ledger with other suppliers from 1925 until at least 1931, after which 1930's records were not available. The ledger did not indicate the nature of Crowley's services.

In 1925 the firm changed its name to Wheel and Rim Service, Inc. Wheel & Rim would remain the parent of the various Gunderson activities until 1958 when the company became so diversified that the brothers changed its name to "Gunderson Bros. Investment, Inc." This new name would survive until June 30, 1965 when the brothers dissolved their interests and sold all of their operations except the Eugene Hotel Company to FMC Corporation.

Early financial aspects

The earliest available financial records* of Wheel & Rim indicate the size of the company: (1927 is missing)

Year	1925	1926	1928	1929	1930
Gross Sales:	$76,578	$97,516	$158,172	$225,165	$181,364
Net Income:	9,883	9,242	16,494	21,454	5,795
Compensation:					
C.E.G.	6,000	8,300	12,000	12,000	19,200
A.E.G.	2,100	2,950	3,600	4,800	8,400
Employees	3,334	3,952	6,604	6,938	10,229

Their balance Sheet appearing in tax returns for the years 1922 through 1927 also indicate the size of the company:

Debits & Assets	**1921**	**1922**	**1923**	**1924**	**1925**	**1926**	**1927**
Real Estate							3,000
Buildings							
Machinery & Equip.	1,250	1,425	2,001	4,139	4,853	4,683	7,108
Less Res. for Dep.					(1,147)	(1,429)	(1,750)
Securities							
Cash	124	73			27	603	162
Notes Receivable				1,815	4,950	4,050	4,050
Accounts Rec'v	1,080	1,742	4,315	3,684	1,897	7,420	6,931
Inventory	2,765	2,185	4,783	5,422	4,210	12,799	15,652
Other Assest							
Due from Officers		2,417	4,419	4,419	4,089		3,001
Cash Value Life Ins.						555	
Deferred Charges			248	248	248	381	436
TOTALS	5,219	7,842	15,766	19,727	19,127	29,062	38,590
Credits & Liabilities							
Accounts Payable	163	453	1,285	1,428	3,420	8,695	10,348
Notes Payable			4,290	5,338	3,108		
Res. for Depreciation			370	865			
Overdraft at Banks			371	1,135			
Due to Officers					1,535		
Capital Stock							
Common	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Surplus	56	2,389	4,450	5,961	6,064	15,367	23,242
TOTALS	5,219	7,842	15,766	19,727	19,127	29,062	38,590

* Copied from company Capital Stock tax return

In 1923 Chet bought a building at 9808 N.W. St. Helens Road near Linnton, Oregon. He received income on the building for several years until about 1935 when he began using it as a warehouse for storing, processing and bagging sheep manure brought in from Eastern Oregon prior to exporting it to the orient as fertilizer. The manure somehow soured and spoiled before it was processed so the fertilizer business was aborted. The building was idle only a few months before Chet had other ideas for its use.

Tax documents indicate that C. E. Gunderson held the Linnton plant under his own personal account until about 1938 when the company holding Linnton was named, "Gunderson Bros".

Chet's mortgage on the Linnton plant called for payments of $45 each month. It appears that he was nearly always in arrears, then records show that he agreed in 1937 to catch up and resume the monthly payments. The late 1920's and 1930's were the Great Depression years. Undoubtedly Chet had a tough time making ends meet.

Wheel & Rim Service remained at 108 - 110 13th Street until 1929 when it moved to 75 Northwest 14th Avenue. It would not change addresses again until 1934 when the business grew into adjacent properties at 225 Northwest 14th Avenue, usually referred to as "14th & Everett".

It is believed that Chet built the building on 14th Avenue and sold it to his company. His 1928 individual income tax return shows profit of $1,320 from the sale of a building costing $13,500. He owned 22/25ths of the building. A contractor's list beginning October 12, 1926 and ending January 11, 1929 total nearly $13,500. A building is listed in Wheel & Rim's Assets list valued at $15,000.

During the years 1925 through 1931 the earliest available personnel records show that the total payroll in addition to Al and Chet was seven to twelve employees. It can be assumed that, in earlier years, Al and Chet performed much of the work themselves adding one or two employees each year. One of their long time employees was Miss Aino Malinen, office manager. She demanded a man's salary and got it.

Borrowing to stay alive

In about 1929, according to Stan Stewart, Chet and Al found their business very depressed and almost ready to go under and another old friend of Chet's, Vic Dalton, came to his rescue.

Dalton had also worked as a clerk at the bank with Chet and Stewart. Stewart said, "After leaving the bank, Vic had fallen in love with a beautiful girl, a beauty contest winner, who was on her way to Hollywood. Vic followed her there. All he had was a tennis racket and a silk shirt and was considered by those who knew him unlikely to succeed. He had to have something to do so he went into the second-hand auto business there and soon had several used car lots all over Los Angeles. Having become very successful in that business and flush with funds, Vic bought a radio station and soon after entered the movie studio business. Chet needed money to rescue the business, but could not get aid from the banks. Chet asked Vic for help and received a loan of several thousand dollars, sufficient to tide the business over until the economic situation improved. Dalton and his girl friend did marry but whether the marriage lasted is not known."

Apparently, whether they could afford it or not, the brothers drove good automobiles. Chet had a $2,731 Pierce Arrow in 1928, and a $2,969 Packard in 1929 while Al had a $2,908 La Salle in 1929. Chet's first wife, Hazel, drove a $944, 1930 Chrysler while Al's wife, Helen, drove a $1,175, 1931 Nash Coupe. The company cars in 1929 and 1930 were a Ford Tudor sedan, a Ford pickup and a Reo truck.

Carburetors; engines, wheels and rims

By 1930 Wheel & Rim Service, Inc. were selling and servicing steel wheels made by Budd Wheel Co., Kelsey Hayes and Motor Wheel Co. and Firestone Tire & Rubber Co. other products included: tire chains, the Beldon line of automotive cable, automotive bearings, spark plugs, Harrison radiators, Delco Remy auto parts and Klaxon automobile

horns. Budd Wheel Co. granted the Gundersons its exclusive franchise January 1, 1930 for the State of Oregon and the Washington state counties of Wahkiakum, Cowlitz, Clark, Skamania and Klickatat and parts of Idaho.

In 1930 Wheel & Rim Service began handling Stromberg Carlson carburetors and parts and United Motors service parts. At about this time Sam Tracey, a former locomotive engineer of the Union Pacific Railroad at its locomotive shop at Cheyenne, Wyoming, joined the company in February, 1930. Prior to becoming an engineer he had fired freight locomotives "over the hump" between Cheyenne and Laramie. When he went to work for Al and Chet he became expert at installing and servicing the carburetors and service parts that they handled. Later, by 1935, he had readily absorbed all the knowledge he needed to work with the Bosch Diesel injection systems when the company received the line for the State of Oregon. He was ready to work with and install the General Motors Corporation, ("Jimmy"), Detroit Diesel engines when the brothers received that line in 1937. During World War II, Sam would supervise the installation of hundreds of diesel engines in the landing boats that were to be built at the Front Avenue plant. He was so busy and in such demand that he promised, "When the war is won not even a crow can find me." Chet thought that Sam was the best mechanic around. Sam was one reason for the company's early growth in the engine and parts business.

On January 2, 1935, Goodyear Tire & Rubber Co. awarded Wheel & Rim its tire distributorship for one year. Later, when Wheel & Rim began trailer manufacture, the distributorship arrangement was substituted with a deal whereby they were able to buy tires at "Original Equipment" prices, substantially below what a distributor would charge. Once this special discount was extended to the brothers, the door was opened for similar discounts from Goodyear's competitors, such as Firestone Tire, Goodrich Tire, Lee Tire, Dayton Rubber and others, to name a few.

On March 14,1935, Chet Gunderson landed the United American Bosch Corp. line of Diesel Fuel Injectors. He was authorized to sell and repair their diesel devices. Contract was until 1940 or until canceled.

April 22, 1935, the company landed the Galion All Steel Body Co., Galion, Ohio, account. This covered dump bodies for the state of Oregon and Clark, Skamania and Klickatat counties in Washington state.

On May 12, 1936, Al Gunderson secured the H.S. Watson line of Brown-Lipe transmission and spicer gears at a discount of 50% off list price.

Then in March 1937, Witte Diesel Engine Company agreed to pay Harry Waggoner (A principal Wheel & Rim salesman at the time) a 10% commission of sales contracts for their engines and electric light plants. When cash was paid for a sale, the commission was increased to 15%. It is not known how, if at all, Wheel & Rim shared in the commission which lasted until about 1940. But as will be seen later, Waggoner pioneered "Packaged Power", which consisted of diesel engines driving electrical generators to supply electric power. There is a note in the archives that indicates that Waggoner and Wheel & Rim split the profit on the sale of an Enterprise Engine and other equipment to a future barge customer, Umpqua River Navigation Company.

Also, about then, Sam Fullman, Parts Manager for Wheel & Rim, negotiated the jobber's price for Alemite Company's grease fittings.

Albert J. Lilygren Co. of San Francisco, Zone Manager for Bendix Products Corp. of South Bend, Indiana, awarded Chet Gunderson the Bendix line of Eclipse gasoline and electric outboard motors. 40% off on motors and 45% off on parts. They had already received the Bendix automotive line in a prior year. It is interesting to note that later, in 1946, Gunderson reciprocated by awarding Lilygren the exclusive distributorship of the

Foldcraft, plywood folding pleasure craft and aluminum ski racks (car top carriers for the boat or for skis.)

Adolph Strid joins Gunderson

About that time, at Wheel & Rim, a rough, tough, but savvy Swede, Adolph Strid, left his job at Wentworth & Irwin, a competitor of Gunderson, and came to work for the company. He became superintendent over the manufacture of single axle logging trailers, a venture the Gundersons wanted to enter.

Also at this time, the Gundersons had taken on the Kay Brunner Co. line of trailer axles. They knew the wheel business. They were already servicing and repairing the brakes on trailers. So why not start building them?

Gunderson brothers activate Linnton plant

The Gundersons decided to use the Linnton building as a job shop for manufacturing their single axle logging trailers, which, up until that time, were being made at Wheel & Rim Service, Inc. in downtown Portland. They acquired some metal working equipment and set up shop there to build the trailers and fabricate metal products.

They obtained a blacksmith's forge to make most of their few-of-a-kind steel forgings in the little blacksmith shop. The blacksmith coal came from Robertson Heavy Hardware. The blacksmiths heated the steel angle-irons, bars and plates to white hot in a forge bellows fitted with a cranked-by-hand air blower. When the steel was almost molten, they formed it into myriads of shapes for brackets, eyes, fasteners, hooks and shackles.

Picture in your mind a sooty, dingy shop with anvil, coal cyclone and dozens of different kinds of odd-looking tools and hammers; the smoke curls up over the bellows to the ceiling. Now listen to the clank, clank, clank-clink, clink-clink-clank of the smithy's hammer as he pounds out the shapes that he needs.

Henry Baum, Sr., the father of Henry Baum, Jr., who was one of the first plant superintendents at the Front Avenue plant, was the blacksmith foreman along with E. Brown. Their helpers were Philip Arndt and Frank Ciehola. Baum, Sr. was born in Russia. His father had a blacksmith shop in Portland and taught Henry how to shoe horses, build wagons, fit wagon wheels and do general smithing.

For decades, even after modern, hydraulic forging equipment had been bought, the small gas-fired furnace was still kept to make a few one-of-a-kind forgoings by hand.

Dual axle logging trailers conceived

In 1937, Strid was transferred to the Linnton shop to oversee the manufacturing. Strid and the Gundersons saw the need to increase trailer capacities. They reasoned that, rather than the single axle units they had been building, logging and highway semi-trailers could just as well be made on a two-axle chassis similar to the rear, dual axle assemblies which were standard equipment on the heavy duty Mack trucks pulling the trailers.

Mack Truck Co., in their truck chassis, employed the use of a ball and block bracing assembly on each of the two axles. Each axle had a ball assembly on one end and a square block assembly on the other end. The balls and blocks were inboard of the brake drums and wheel hubs. The ball on the first axle was installed on the opposite end of the ball on the second axle. Likewise the blocks would be transposed to each of the two axles. The blocks provided stability against brake torque forces and the balls would allow the braking and traction forces to be absorbed into the truck frames. This made an ideal assembly when trucks were used on either smooth roads or the hilly, rough roads of the forests. This concept was tried by Strid on the logging and highway trailers and it was an

immediate success. Virtually overnight there was a big demand for the dual axle logging and over-the-highway trailers built by Gunderson.

The Updegrave Bros. Logging Company had an order with Gunderson for eleven single-axle logging trailers. About six of the trailers had been completed but they were so anxious to have the extra capacity that they asked that the remaining trailers be built with the dual axles. In addition to the Updegrave Brothers, among the most loyal customers Gunderson had were Crown Zellerbach whose operating engineer was Lloyd Christenson, Bob Heintz's Interstate Heavy Hauling Co., Niles Motor Company of Coquille, Oregon and Willamette Logging Co., Lebanon, Oregon.

Trailers paid for with promissory notes

Gunderson sold many logging trailers to individual truck drivers. The drivers paid for the trailers with promissory notes which agreed that the owner of the logs could withhold from the hauler's bill his trailer payments and remit them to Gunderson. To get quick cash, Gunderson would assign these notes, which were negotiable, to the bank and the bank would receive the payments from the owner of the logs. Niles paid with a note and a small down payment. Gunderson then took the note to the bank who discounted it.

Gunderson's competitors, seeing the same potential of the new dual-axle trailer configuration, rushed into production with their own versions and cut into some of Gunderson's market share. Instead of the high numbers the company had anticipated, a large order dwindled to ten from twenty of a kind. Fruehauf Company, Page & Page, Peerless Truck and Trailer Company, Pierce Trailer Company, Trombley Truck & Trailer Company and Wentworth & Irwin, all worthy competition, helped penetrate the market; but Al and Chet believed the Gunderson trailer was the "Cadillac" of them all.

Rims and hubs for pneumatic tires–Chet's Idea

According to Charles E. Sikes, a former executive with Wheel & Rim Service, Inc., most trucks had solid tires until about 1936. Then the state law was changed and the Attorney General required trucks to have pneumatic (air-filled) tires. This development gave Wheel & Rim Service, Inc. a strong impetus forward.

The pneumatic tire required a new type rim and axle hub. As a result, a two piece, bolt-on tire rim combined with a cast steel, spoked wheel and axle hub casting which bolted to the axles was developed to accept the air-filled tire and was in wide use in the East and in California. Mounting and demounting the tires and wheels was a laborious process. The whole assembly was very heavy and cumbersome. In those days the tubeless tire had not been invented and a rubber inner-tube repair could be a big headache.

Sikes remembers, "Chet Gunderson got a better idea when he found out that the Budd Wheel Company was developing a very lightweight, thin steel, disc wheel which could be bolted directly to a hitherto yet undeveloped, cast steel hub on the truck axle. Such an assembly would be much lighter and the mounting of the tire would be greatly simplified. He envisioned a rapid acceptance of the new assembly. The truck industry was slow in recognizing the advantages of this lighter weight wheel assembly," because of resistance to change or reluctance to depart from the conservative ideas of the time. Chet wasted no time in securing the Budd Wheel franchise for the Oregon territory.

Chet designed a hub for the disc wheel and developed a source for the casting at a Vancouver steel foundry in Vancouver, Washington. The Budd disc wheel could be mounted on this axle hub. Then in a simple operation, a pneumatic tire could be mounted on the wheel with much less elbow grease. The weight savings had a material effect on increased hauling capacity and resulted in added freight revenues for the trucking

companies. During that period of time, there was a rule-of-thumb measure that a pound of weight saved on a truck-trailer unit would save a dollar per year.

Sikes recalls that up until about 1950, large quantities of cast, spoked wheels were in almost exclusive use all over America. That was the market that the Budd Wheel Company secured as a result of Chet's pioneering this radical change. Thus the innovative Gunderson company, in the West, influenced a nationwide changeover to the cast hub-disc wheel combination and the demise of the old, cast spoked wheel. Sikes summed up this development of Gunderson, "Their business boomed, and eventually they had branches, I believe, in Spokane and Seattle. It is not common knowledge in the truck lore, but the job of selling disc wheels done by the Gundersons in this period was largely responsible for the widespread use of disc wheels in the West and eventually all over the country. When I got into the truck business in the early forties, disc wheels were almost unknown east of the Mississippi River."

School bus bodies unprofitable

For a few years until about 1940, Superior School Bus bodies, hearses, ambulances and van bodies were assembled at the Linnton plant and sold out of the 14th & Everett offices. With the onset of World War II, however, and Gunderson's advent into the war material supply, the line was sold to the Schetky brothers, a Portland firm similar to Gunderson. This line of bodies had not been profitable. The Gunderson's lacked the expertise needed in lightweight sheet steel metalworking, so their labor costs made them non-competitive. Fitting the seats in the busses, getting the windows to work and installing the doors was very difficult even with the best of hands.

Wheel & Rim lands General Motors diesel engine line

In 1937 Wheel & Rim Service picked its biggest plum to date. General Motors Corporation had just finished developing the two cycle, diesel engine for truck use at its Detroit Diesel Engine Division in Detroit, Michigan. Al and Chet secured the distributorship for these engines. With this line of engines Wheel & Rim Service, Inc. not only augmented its existing lines of auto and truck parts, sales and service, but also was able to replace gasoline truck engines with the more economical engines which used diesel oil, a much cheaper fuel at that time.

Packaged power

Additionally, in 1938, there was a large, untapped market for the diesels in boat propulsion and in stationery, stand-by emergency power plants. This combination of diesel engines driving an electrical generator, became known as, "Packaged Power". The term, coined by General Motors and used extensively by them world-wide, was the result of Gunderson's idea to link two engines to one generator.

Diesel engines replace gas motors and steam engines

Prior to then, large, expensive gasoline or even steam engines were used to drive boats, electrical generators and logging winches. Harry Waggoner, a Gunderson engine salesman and real innovator, came up with an idea to drive a large generator with two standard diesel engines and called it, "Twin Engine Power Package." Because these engines were mass-produced and therefore cheaper per horsepower, using two of these engines was cheaper and easier to maintain than one big gasoline engine with equivalent horsepower. In one isolated eastern Oregon town, that had no electric power, Harry

convinced the city fathers to put up enough money to buy a two-cylinder diesel-generator set and install the first street lights the town had ever had.

According to Sikes, "Harry was very important to the Gunderson activity in selling General Motors Diesel Engines. Gunderson was the first representative of GM Diesel in Portland, beginning in 1938. Harry possessed a very unusual imagination and dreamed up applications that opened innovative markets for this new product."

Sikes recalled, "Another and more important inspiration Harry had resulted from the need for more powerful logging yarders to replace the early steam power. Harry recognized the fast response of the GM two cycle engine, and sold the idea of linking two engines through hydraulic couplings to one drive shaft to power the cable drums. The first sale to Stone Logging in Tillamook (Oregon) was used by GM in national advertising. Later GM linked the two engines with a gear train instead of the hydraulic couplings and thus was born the 300 plus horsepower unit that drove hundreds of World War II tanks and many other industrial machines."

When Front Avenue was grabbing all the headlines, the *Gunderson Gunner* (on May 6, 1943) quoted Charles Sikes, Office Manager in 1938 and an associate of Waggoner at the fourteenth and Everett Equipment Division, "After all, we were doing business all over the state when Front Avenue was just a vacant lot." The *Gunner* went on, "They did a good job of it, too, (selling packaged power) when times were tough and selling diesels was like selling ice boxes to Eskimos."

The birth of Gunderson Bros.

In 1938 the Gunderson brothers formed a corporation for the manufacturing plant in Linnton and named the business "Gunderson Bros". It was never spelled out as "Gunderson Brothers" but always as Gunderson Bros. It was a division of the parent, Wheel & Rim Service, Inc.

During the next few years at the Linnton location the brothers saw opportunities unfold which would eventually create an industry employing many thousands of people in the Portland area. In a photo taken in 1938 at the Linnton Plant, the entire work force of Wheel & Rim and Gunderson Bros. is standing on the deck of a Gunderson dual-axle, flat bed semi-trailer. The head count, including Al & Chet, was 41 employees. The same day that the photo was taken, another picture shows the same group dining at a banquet in the 2nd floor lunch room at Linnton. It is not known what occasion was being celebrated, but I believe it was the 20th anniversary of the company, first known as Wire Wheel Sales & Service, founded in 1918, in Seattle, by Chet Gunderson.

Among the first companies supplying every-day materials to the Linnton plant were Columbia Steel Company (later U. S. Steel Corp.), Hazeltine Hardware Company, Honeyman Hardware Company, and Robertson Heavy Hardware Company. Alex Walker was Columbia's salesman, Christy Christenson was Hazeltine's man, Clete Glennon represented Honeyman, and Henry Groth, a good Swede, sold for Robertson. Glennon remained my dear friend until his death at age 90 in January 1992.

Al Walker dangled a carrot to my buyer's nose. We were buying a few thousand pounds of steel at a time and paying about four cents per pound. He said he could save us almost two cents a pound if we bought 20 ton carloads at a time.

In 1938 and 1939, times were so tough, most steel came in c. o. d. and in the smallest lots possible. It was not until we began making war goods that we could buy most of our steel by the carload.

Trailers and tanks

The nucleus of the business at the Linnton plant was the manufacture of trailers for hauling logs, dry cargo and all types of petroleum products. They could equip a truck with a gasoline tank, and by installing a tow hook on the truck were able to tow a trailer equipped with a gas tank. A truck with a fifth wheel (a device for coupling semi-trailers to the truck) enabled the truck to tow a one or two axle semi-trailer. In a semi-trailer configuration, the front end of the trailer would be fitted with a pin which would lock into a pocket in the truck's fifth wheel holding the truck and trailer together.

The Linnton plant also made underground and above-the-ground gasoline, oil and water storage tanks. There was a metal shear and a press brake with which to cut and form steel shapes, and they could weld. They sold much shearing, forming and welding of steel plates and shapes to other shops in the area.

Gunderson enters trucking business

In 1938 the brothers bought Mogul Transportation Company from Mr. Moe Gollick for about $30,000. The purchase also included four Oregon service stations for $34,000. They were located in Cottage Grove, Hood River, Marshfield and Sandy. The service stations were held under C. E. Gunderson's name. There were six tank trucks and six tank trailers and one semi-trailer with tank. They were overhauled and the trucks' gasoline engines were replaced with General Motors diesel. Mogul hauled Richfield, Signal and Standard Oil gasoline and other petroleum products to Goldendale, Kelso, Longview, Vancouver, and Walla Walla in Washington; and Astoria, Baker, Coos Bay, Eugene, La Grande, Madras, Pendleton, Reedsport, Seaside and other cities in Oregon. Most of Mogul's business in the later war years was serving the army and air force bases with their petroleum needs. Charlie Sikes explained that the purchase of Mogul provided an excellent opportunity for the training of Gunderson's mechanics to re-power the trucks with General Motors diesel engines, to learn how to service them and to improve the worth of the diesels in operation.

When the brothers bought the Mogul truckline it was transferred from its location on 95th and Sandy to the Linnton plant. With the truck line came its dispatcher and bookkeeper, Hubert Walker. He shared the Linnton office with the rest of the Gunderson officers, Adolph Strid, Thomas J. Larsen, (sales engineer) and the author. Later, Walker was replaced by John A. "Johnny" Carlson, who soon joined the navy and was replaced by Ms. Louise Sullivan.

In 1943 there were about 35 men on the payroll in addition to Sullivan. They were drivers and mechanics. Due to the shortage of highway maintenance workers, the roads were rough and in a state of bad repair, so every time a truck unit would get back from a trip, the mechanics would jump in and repair the damage and a new crew would take off on another trip. There was a joke among the drivers about the roughness of Front Avenue which they used in getting to the Broadway bridge. They said if they could make it to the bridge without a breakdown their truck would make it all the way to the end of the line and back. In the July 1, 1943 issue of the *Gunderson Gunner*, one of Mogul's drivers summed up in verse Mogul's busy activities:

"This is just a little verse
Of the Mogul Transport Line.
Let's name them off, one by one,
And see what we can find.

"There's Andy Dandy, he's the boss,
He really frets and stews.
He swishes here–swishes there,
There's always something new.

"Now Mrs. Sullivan, our dispatcher,
She really runs our truck line;
For her, we all get in a lather;
We think she's mighty fine.

"There's Frank and Dwain, mechanics,
Of that title we won't bandy;
Wonder what they wipe their hands on
When no steering wheel is handy.

"There's Bill Brooks and Walt Nourse,
And Chet and Johnny Brown,
And Bob on number seven
Hauling black oil all around.

"Put all this crew together,
They're mighty hard to beat.
They'll keep the old line rolling,
Through rain, ice, snow and sleet."

-Bob Burbank

Mogul transportation sold

Mogul transportation Co.'s book value on December 31, 1942 was $72,360 with net depreciated value of $38,491. It was sold November 8, 1943 for about $72,000 and the two brothers, Al and Chet, divided the money with Chet receiving slightly more than half. It is not known how long Chet held the service stations or whether he made a profit on them when they were sold.

When Mogul was sold, Louise Sullivan went to work for Williams Air Controls and eventually became its Treasurer.

55 employees in 1939

In 1939, Wheel & Rim on 14th street had 20 employees in addition to Al & Chet, seven in the store and sales, nine in the shop and four in the office including Chet's daughter, Betty. At Linnton, there were about 35 employees including four in the office.

Linnton's sales in 1937, 1938 and 1939 were $210,000, $164,000 and $223,000 respectively.

The Bridge of the Gods

In 1939, Gunderson Bros. built one of the first piggy-back trailers for hauling automobiles. Up until that time, autos were driven from the factory one at a time. The Consolidated Convoy Company, a division of Consolidated Freightways, wanted a lightweight convoy trailer and designed one out of aluminum. Suitable for hauling three automobiles or trucks it provided the eventual answer to their search for an economical,

fuel-saving and very lightweight trailer. A sign was painted on both sides of the trailer with the famous catch words, "Watch the Fords go by." The Gunderson workers, never having seen the likes of such an unusual structure, dubbed it "The Bridge of the Gods".

Welding of aluminum at the time was not a well-known art, but Gunderson Bros. blithely tried it. Most of the metal stuck together and some didn't. After much hassling back and forth the two companies made the thing work and continued to be on friendly terms. Consolidated, before and after that job, bought a great deal of steel fabrication from Gunderson.

The "Piggy-Back" trailer became the forerunner of the auto carrier, of which hundreds of thousands roll over the highways today. The truck and trailer units being built today can carry up to ten automobiles!

Gunderson's first ship

In 1941, the first boatbuilding event of any kind occurred at Gunderson's Linnton plant. It was the J. B. SWITZLER, built for William Switzler, operator of the Maryhill ferry across the Columbia river. L. S. Baier, Naval Architect had just hired on at Linnton prior to the opening in 1942 of the new company shipyard at 4700 N. W. Front Avenue upstream on the Willamette river from Linnton. The boat was designed by Baier and constructed under his management and tutorship. The *Gunner*, Gunderson's bi-monthly publication, said on August 17, 1944, "The vessel, the first of a long line of fine craft to be built by Gunderson craftsmen, was named for the owner's father and is still in service pushing and pulling the Maryhill ferry across the Columbia river. Darned good ship, too; never a bit of trouble according to her operators."

When the material was ordered for the J. B. SWITZLER, Baier rattled off a list of steel, pipe and pipe fittings in order to get a quick start on the tug. When she was finished she was placed on skids and pipe rollers and rolled down through neighbor Richfield Oil Corp.'s tank farm to the banks of the Willamette where she was hoisted by a crane into the water.

L. S. Baier went to Front Avenue in Mid-1942 and became General Manager, where he oversaw the building of lifeboats, liferafts and tank-lighters (LCM's).

So it was, that Gunderson augmented its original wheel and rim business with the sales and service of truck parts and General Motors Diesel Engines; the manufacture of trailers and tanks at Linnton; and the first experience in tugboat construction. During the same period it went into and out of the trucking business. Several of its technological innovations profoundly benefited the nation's wheel and rim, and trailer industries. Similarly, General Motors and its "Packaged Power" idea received a strong impetus at Gunderson.

Chapter 4

The crisis years

Charles E. "Charlie" Sikes is one of the original Gunderson managers whose energy and initiative helped preserve the company when it was in trouble, and later became a major force in its rapid growth. His career with the Gundersons and FMC spanned 29 years, from October, 1939 to May, 1968.

Risky credit transaction at olds & kings

Charlie's narrative in which he recounted the travail that honed his skills in money and sales management and led up to his successful career at Gunderson, follows:

In late 1933 and early 1934, Charles was roaming the streets of Portland selling bookkeeping machines for Underwood Elliott Fisher.

Through a fellow Underwood salesman Sikes learned of a job opening at Olds Wortman & King department store in uptown Portland, that involved handling of credit, supervising the billing and collection of accounts. He applied and landed the job.

Buying a suit on credit

One day the owner of a Portland industrial fastener business came into the store and asked if he could get $48 worth of credit, enough for the price of a new suit. The executive gave Charlie a story of how his bookkeeper had made off with $2,000. and as a result the business was in dire need of a loan. The man complained that he couldn't go to the bank for a loan, "Looking like a bum." He vowed that if the bank approved the loan he would pay for the suit the next day but, if not, he would pay for it at $2 per month, with interest, until it was paid for. Charlie approved the credit, the business man got the loan from the bank, and the suit was paid for as promised. Charlie's boss, John Smith, who normally approved credit but was not around to affirm the risky transaction, gave Charlie a severe reprimand. Although Charlie didn't please his boss, the man he helped would return the favor in later years as will be seen.

In 1936, after his short stint at Olds & King, Charlie joined the General Motors Acceptance Corporation, a finance company. One of his responsibilities at GMAC was to check on his company's inventory of consigned Detroit Diesel Engines being floored until used, then paid for, at one of General Motor's first Northwest distributors, Gunderson's Wheel And Rim Service, Inc.

Gunderson Bros. on shaky ground

During 1938 the Gunderson brothers were having a tough time financially. Their debt at U. S. National Bank had risen to a staggering $600,000. Collections were slow, Accounts Receivable were $550,000. Competition was keen, prices had to be shaved, and not many of the jobs they did were very profitable. Their lines of school bus bodies, hearses and light metal truck bodies involved sheet metal work, for which their employees were not skilled. Adolph Strid, who came over to them from a competitor, Wentworth & Irwin, experts at that kind of work, couldn't duplicate the Wentworth equipment and skilled workmen needed to do as well.

Many of Gunderson's suppliers had put them on a c. o. d. basis, and supplies couldn't be obtained without a check or cash. The payroll checks would "bounce" for lack of funds to balance to all needs. On a Friday afternoon the employees would pick up their checks; then, on the next Monday, Gunderson would be besieged by phone calls from

bars and grocery stores asking for the money to cover the checks. Miss Aino Malinen, Office Manager at Fourteenth & Everett headquarters, would tell the businesses to re-deposit the checks, generally that Monday. Once in a while a check might "bounce" two times before it would clear the bank. The problem was caused by Gunderson having to wait a long time before they received their money from jobs that were barely profitable. The practice of discounting some of their invoices at the bank further reduced their profits.

Sikes joins Gunderson

On being fired from GMAC in September of 1939, Sikes decided to apply for a job as a bookkeeper at Wheel & Rim. He was hired in October of 1939. He gave as his main reasons leading up to that decision, "I had noticed that GMAC customers almost never drove Cadillacs and Chet and Al Gunderson had a reputation for knowing how to make money in operating a business." The Gundersons drove fine automobiles.

Bank nearly forces Gunderson into bankruptcy

But Charlie had arrived on his new job situation in the middle of a crisis as he tells in his writings:

"The activity at Linnton, and the sale of Detroit Diesel engines, expanded the requirements for financing and affairs at the bank were becoming strained. Money was short and the Gundersons were never too politic in their relations with the bankers. The Gunderson account was in trouble at the bank. The top officers began to get nervous. They could not get financial statements that meant very much. The Gunderson brothers were never available to talk with them, yet the need for money was growing all the time. The second of two representatives handling the account for the bank went to Paul Dick, then President, and said the condition was beyond his control and convinced Mr. Dick the Gundersons were insolvent and the bank should get out.

"The change in Oregon Law which permitted branch banking had resulted in U. S. National buying several down state banks, and some of them had gotten in trouble in the aftermath of the financial difficulties in the early thirties. A liquidation staff was set up by the bank to work out the best solutions it could contrive to minimize losses for the bank.

Aard Ady saves Gunderson from foreclosure

"Aard Ady, an officer of the bank, had been working for the director of the liquidation staff and, as a result of his experiences, was called in by Mr. Dick about mid-summer of 1939 and told to take over the liquidation of the Gunderson account or come up with a survival plan for it. All to be done within three weeks. The bank was Gunderson's largest single creditor. Ady spent six weeks studying the situation and came to the conclusion the company was salvageable on the condition an accountant who could produce reliable statements would be hired, and that an office manager responsible to Ady would be hired. He explained his feelings to Dick who said, 'Go ahead, do it.'

"Ady confronted the Gunderson brothers with their dilemma, and, with no choice, they agreed to the conditions. Ady found, and hired, Burton Smith , a Certified Public Accountant. Smith took the job despite Ady's warning that he couldn't guarantee him a dime. I had just been liberated by GMAC, and, at the crucial time, came to see the Gundersons with whom I had become acquainted through checking motor flooring for GMAC. They referred me to Ady and, as a result, the Gundersons released Aino Malinen and hired me as Office Manager.

Ady convinces creditors to go along

"Ady told me recently, in recalling the past, and it was news to me, that during his study period, representatives of Budd Wheel Co., General Motors, Shuler Axle Co., a spring supplier (probably Benz Spring Co., Portland,) and Superior Bus Body came to Portland and agreed that Gunderson should be thrown into bankruptcy. Ady, (Already having initiated his actions) therefore had the whip hand in his discussions with Al and Chet, with the bank and these major suppliers, and they all agreed that control could not be left alone with the Gundersons."

In a 1989 interview with Aard Ady on the subject of Gunderson's problems with the bank, he recalled Gunderson's bank debt was enormous and was not being serviced. The U.S. National Bank chose to assert its rights under the law governing foreclosure (at that time) before a bankruptcy referee could beat them to it, and forced the brothers to open their financial records for examination and scrutiny.

Dick gave Ady six months to find out what was wrong and come up with a blueprint for action. If he couldn't get cooperation from the brothers he was to feel free to come in to the bank's office and throw them into bankruptcy. Five suppliers had also shown up with bankruptcy papers but were second in line behind the bank.

Brothers essentially dead broke

Financial statements led the brothers to feel they were making enormous profits when, in fact, they were essentially dead broke. Sikes said that the reason for this was that, as fast as the brothers made money, they invested it into property and were chronically out of cash. They were caught in an economic cycle during which it was impossible to borrow against property.

Ady looked at their operations and found they had a large backlog of logging trailers and diesel engine truck conversions. He also saw that there were about 50 conscientious and hard working men and women whose families depended on them who would be thrown out of work. For these reasons Ady concluded that there was a chance for survival, on the condition that the bank have total control throughout the crisis. He laid down a blueprint for action to be carried out discreetly without general public knowledge. He convinced the five suppliers to go along–that there was no point in trying to foreclose and squeeze a few dollars out of the brothers–the bank would lose 50%, but the suppliers would lose most of theirs.

Certified public accounting firm retained

The Gunderson brothers agreed to the following conditions: (1) the firing of the bookkeepers who had failed in their duties, (2) the hiring of Burton M. Smith, a Certified Public Accountant and (3) the hiring of a tough office manager to monitor activities, cosign the checks and protect the creditors' interests.

So, as Charlie said, "During all of this financial peril we have Aard Ady of the United States National Bank to thank for his cooperation in helping to keep us in business." The end result of his faith in the company and his aid in keeping it going gave employment and careers to thousands of Gunderson employees into the 1990's and a continued, substantial contribution to the economies of Portland and the State of Oregon.

Cash flow and bouncing checks

As Office Manager, Charlie's first responsibilities included supervising the payroll, costing, accounts receivable and payable. But his main job soon evolved into keeping the Gundersons one step away from bankruptcy by fast collection of cash receipts, allocating

them to the creditors who were making the most noise and maintaining daily contact with the bank.

Business was so scarce during this lean period they were forced to subcontract fabrication work from anyone who had work to farm out. Fortunately they had one of the largest steel shears and forming brakes in the area. They used them to cut and form steel frame members and panels for the auto convoys and trailers being built at the time by Consolidated Freightways. As soon a job was finished Charlie would make up an invoice and hand carry it to Consolidated so he could pick up a check for the work. He would wait in the Treasurer's office until the check was ready, then rush it to the bank.

By the summer of 1940 money tightened even further, so Charlie had to do some fast footwork at the bank. He would go to the third floor of the bank at 3:00 in the afternoon, sit there until the check overdraft list came out, then with his list would hurry down to the main floor and stand there until the officer in charge of accounts gave him a note to sign to cover the overdrafts.

Money was so short he would show up with the payroll checks at the Linnton Plant on Friday night as late as possible so that nobody could get them to the bank that day. In fact, a year before, on a Friday evening in September, the checks were late. This being the author's wedding weekend, he had to borrow $15 from a friend, Frank "Shorty" Heikkilla, or not go through with it.

"When can I put dem back?"

The Owl's Perch in St. Johns knew Gunderson was in trouble but kept cashing the pay checks because they knew that Charlie would make the checks good. Every Tuesday morning he would get a telephone call, "Charlie, dis is Louie from de Owl's Perch. Charlie, I got six back today. When can I put dem back?" Charlie vowed, "OK, hold until Thursday and the money will be there."

1940 was a difficult time with checks that bounced and the struggle to stretch every dollar to meet yesterday's emergencies. At about that time Al Gunderson came to Charlie and was distressed because he had failed to get a loan from the Small Business Administration which would give the business a little breathing room to get back on its feet. They owed about $70,000 to their creditors. On paper they were not actually broke, just terribly short of money because so much of it was tied up in property and machinery; and collections were very slow. Al had a list of about forty creditors and the amounts owed them. "Charlie," Al fretted, "we simply have to get these accounts stretched out. I'll take these big ones myself and here's a list I want you to take and see every one of them and get the best long term payment agreement you can. Give them a note for whatever deal you can make."

Charlie's suit customer reciprocates trust

So Charlie took his list and the first man he went to see was the man whose credit for the $48 suit Charlie had approved at Olds & King. His payable was $365. When asked for help, the man volunteered, "Charlie, you helped me when I needed it so I'm going to help you now. You can pay me back at $10 a month for 36 months, (with a small rate of interest) and give me a note on it." That benefactor was Ken R. Humpke, the founder of the supply company bearing his name.

Charlie then took that note and went on to the rest of his list and got a deal from many of them to pay them all over a period of three years. It helped to save the day for the time being.

Engine problems

In addition to the tight money problems, the Equipment Division at 14th & Everett was having terrible quality problems with General Motors engines. Customers' trucks they had equipped with the diesels were having piston seizure problems. One customer's truck stalled on the road and he happened to telephone in from near Mt. Shasta in Northern California at the very same time the General Motors Service Engineer, Max Schachner, was visiting with Al Gunderson and Sikes. They had been having trouble convincing the engineer that the problem had become an enormous (for them) cash drain. Having to pay up front for the repair, then wait until General Motors decided how much and when they would reimburse, while customers held up installment payments on the trucks, was causing a money crunch. Al handed the engineer the telephone and told him, "Here's another one. You tell the man what to do." The engineer instructed the driver to pull his truck into a shop in Redding and authorized fixing the motor. After that occurrence General Motors sought out the problem and eventually solved it.

Gunderson turns the corner with defense work

The company operated on a hand-to-mouth basis until the end of the year. On Christmas Eve, in 1940, Charlie attended a meeting at the 13th Naval District Headquarters in Bremerton where the Navy was lining up metal fabricating shops to take wartime contracts. Out of that meeting came a contract for crow's nests (the observation platform at the top of a ship's mast,) hatch covers, manhole covers, watertight doors and many other ships' outfit items. An early lesson in defense work quality occurred when the company contracted with the Astoria Marine Construction Company to build fuel tanks and water tanks for their wooden mine sweepers. The tanks were made out of wrought iron which was very difficult to weld and the tanks were rejected time after time until they were corrected. This was the beginning of Gunderson's entry into war work at the Linnton plant.

In 1941 the company began producing those ships' parts for the Gibbs & Cox Company of New York City. This company was a contracting agent for the government and was overseeing procurement of defense supplies being sent to Great Britain under Lend-Lease. Lend-Lease was a program initiated by President Roosevelt to aid countries in resisting aggression from Hitler's Germany. Some $50 billion in aid not only helped the Allied cause but fostered the growth of the country's war industries which were destined to produce many more billions of dollars' worth of war equipment. A great many of these items would go to local shipyards operated by Albina Engine & Machine Company, Commercial Iron Works, Kaiser Shipyards and Willamette Iron & Steel.

Thomas J. "Tom" Larsen, Linnton Plant Manager and a fine structural engineer and estimator, handled hundreds of inbound orders for these ship's parts. He ably translated Gibbs & Cox's and others' plans into shop language for production and scheduling.

Gunderson enters shipyard business

In the Fall of 1941, while the Gundersons were looking for more defense contracts to build navy boats and ships, the Navy informed the brothers it was sending its representatives to Portland for a visit, to look over the premises and talk to them about building LCM's (Landing Craft, Mechanized.) Simultaneously, Chet and Al had been negotiating with the United States Maritime Commission to build lifeboats from plywood. They had been awarded a contract to build one boat which the commission could test to find out if it was seaworthy. This boat would be built at the 14th & Everett location.

Meanwhile, Chet had gone to somebody who owned 11 acres of river front property and had obtained an option to buy it for $11,000. That land would become the site of the 4700 N.W. Front Avenue plant. Al Gunderson was rather upset because his brother had contracted to buy this property without his knowledge.

When the navy people arrived for their appointment with Chet, he took them to Linnton and showed them the plant and all of the war products we had been making there. After that, he took them to the river-front property, which was nothing but trees, weeds and sand, and painted such a word picture of what he could do, he got a Letter of Intent from them for that first order for tank lighters. (LCM3's)

Chet immediately engaged Walter E. Kelly as his architect for the building. Kelly's original rendition of the building survives in Gunderson's archives. Kelly was Chet's architect for a previous building venture, the new $15,000, 14th & Everett building for Wheel & Rim, finished in 1929. Chet was loyal to his contracting friends. Another one, Fred Reimers, of Reimers & Jolivette, building contractors, built both of these buildings. (Both of these contractors were listed by Chet in toting up his 1929 building)

Switching banks

In the meantime the problems at the U. S. National Bank were growing. The Gunderson's sporadic and sometimes sketchy financial statements still did not satisfy the bank.

Relations with the bank stretched even further when the Gundersons were forced to deed over to the bank their Linnton plant until their bank debt could be brought under control. The Linnton plant-site was bought by Chet from Caroline Kreuger in 1923 and his payments were $45 per month. During the depression years these payments were in arrears. In 1939 the Kreuger family must have applied some pressure to get the mortgage payments back on stream again because the brothers agreed to resume the $45 monthly payments. Apparently the property was free and clear when they deeded it over to the bank. The deed stated that the "Grantors" (Al and Chet) covenanted to and with the grantee (the bank) that the "granted premises are free from all encumbrances."

According to Sikes, Frank Hak, the bank's officer in charge of the Gunderson account, and Chet were at odds because Hak demanded financial statements and it came to a head when Hak laid down an ultimatum - no statement, no money.

As a result Chet approached First National Bank for financial help and, on Thanksgiving day, 1941, the Board of Directors of the First National Bank met in a special session and voted the loan the Gunderson's needed to build the Front Avenue shipyard and order steel for the LCM's.

Ady felt he had been betrayed after having originally rescued Gunderson from financial failure.

Later in the 1960s when Al and Chet began to have serious personal differences, and the new bank sensed the brothers were on a collision course, they put pressure on the brothers either to make peace or put up more collateral, pay a higher rate of interest and made some strenuous conditions for further financing. Blood proved thicker than water. The brothers buried the hatchet temporarily and switched a major portion of their banking from the First National Bank back to the United States National Bank.

The Lawrence warehouse era

From the latter part of 1941 through most of 1943, the bank imposed a rigid condition that all of the steel coming in for the LCMs was to be stored in a bonded warehouse and controlled by a bonded warehouseman selected by the bank. The second condition

required a bonded employee of Lawrence to take custody of all incoming steel until its certified use was recorded. The "warehouse" site was delineated within a designated area of the Linnton plant. The warehouseman was bonded under strict guidelines and acted as an employee of the Lawrence Warehouse Company in whose custody the steel was held until its certified issue was recorded. E. M. "Benny" Lundquist was loaned to Lawrence by the Gundersons and was appointed as Lawrence's bonded warehouseman. He still performed his other duties just as he did as an employee of the Gundersons. Each release of steel had to be accurately typed out on a fancy, engraved document resembling a stock certificate, with the steel properly described and weighed. The warehouse "receipt" would then trigger a Gunderson payment to the bank for the steel so issued. This arrangement ensured that the steel would be used for the true purpose intended and not spirited away on some other project not covered under the loan agreements.

R. H. Spear and daughter, Muriel join firm

To further protect the bank's interests, another clause in the loan agreement with the First National Bank called for the hiring of someone qualified to oversee the financial operations at Front Avenue and Linnton.

The brothers sent Charlie to interview with the President of the First National bank so he could explore Charlie's qualifications for the Front Avenue Controllership. After some discussion they both recognized someone with a Certified Public Accountant's background, which Charlie didn't have, would be required.

That was when, in September, 1942, Raymond H. Spear, always respectfully addressed to as "Mr. Spear", was interviewed and hired for the job by Al and Chet in September, 1942. In October, 1942 Muriel Spear, his daughter, came to work for Gunderson as a file clerk at a salary of $100 per month. She left a $80 per month job at Lipman Wolfe & Co. Her career ended 42 years later at which time she had been the company's Personnel Manager. More about Muriel later. (See Footnote 1)

Big check arrives

On about December 1, 1941, the first progress payment of $234,000 came in and Al and Chet looked at the check and thought they had "all the money in the world" but Charlie said it was all gone in 24 hours.

The company was incorporated in the State of Oregon on May 29, 1942 and the name was changed from Gunderson Bros. to Gunderson Bros. Engineering Corp.

Front Avenue plant opens for business

When the Front Avenue plant was ready to occupy in about June of 1942, Al and Chet moved from 14th & Everett to their new offices. Chet, during the building of the new plant, already had a desk and chair there so he could closely supervise the activity. In addition to the plant facilities, a marine railway was built for launching vessels by means of a launching cradle on rails which carried the boats while being lowered into the water by a an electric winch.

Sikes continued to run the Equipment Division while the brothers were busy with the other operations.

In leaving the uptown office for the Front Avenue location, Chet admonished Charlie, "You can do the Equipment Company; just don't lose us too much money." That left Charlie almost alone at 14th and Everett. Al rehired Aino Malinen to keep the books and Charlie moved into sales. During the summer of 1941 the equipment business was deteriorating and three salesmen, Bob Gilmore, Red Bennett and Ed Flynn weren't

getting much business. They left to take on activities tied to the war effort. So Charlie's entry into sales was a timely move.

After moving into the new shipbuilding plant on Front Avenue, the company had extra room to fabricate other equipment besides tank lighters and life boats.

Gunderson wins big trailer order

Their reputation as builders of heavy duty logging and over-the- highway trailers enabled them to enter the competition for U. S. Army Ordnance trailers of all types. They went after, and got, an order in 1944 from the U. S. Army to build 800 machinery trailers, a job which was "a natural" for them. Ultimately, however, half of the order was canceled and Gunderson finished the 400 trailers in 1945.

They were embarrassed, however, when they were not successful in landing any of the several bids made for army ordnance light carts or trailers being bought by the army in the thousands of units. They found, after each bid opening, that their price was 25% to 50% higher than the low bid. The low bidder would be Ford Motor Co., Chrysler Corporation or Food Machinery Corporation. Little did Gunderson know, at the time, that the latter company would become its parent in 1965. (By then it had changed its name to FMC Corporation.) These companies had mass production facilities and enormous buying power for truck and automobile parts. Gunderson simply couldn't get its prices down enough to receive an order.

Sikes looks to his future

Throughout 1942 Charlie was thinking that he didn't want to be a bookkeeper the rest of his life. He kept looking for opportunities to increase his experience and ability in sales. (He already had the White Truck and General Motors engine lines at the Equipment Division.)

In November of 1942, the White Truck Company Sales Representative, E. B. "Gil" Gilliland came to Charlie's office with an interesting fact. In 1941, the registry of logging trucks in the State of Oregon showed 75% of the trucks were 1-1/2 ton capacity. He claimed they were not adequate to go into the hills and down into the canyons loaded with logs. To support this conclusion he brought a letter from a potential customer, Rosboro Lumber Co. who had built a sawmill in 1940 at Springfield. The owner told of his Ford trucks being broken down a lot of the time and urging, "Please come down to Springfield and sell us some heavy duty White Trucks."

Gilliland was unwilling to go to Springfield unless the Equipment Division would pay the traveling expenses. Charlie, seeing a great sales possibility, said, "OK, we'll pay the expenses but I want to go along with you."

Lands White Truck business

When Charlie returned from Springfield he brought back an order for six white trucks and six logging trailers for $48,000: ($6,000 each for the trucks and $2,000 each for the GB trailers.) It was the biggest single order ever received by the Equipment Division. Charlie was so "hyped" up he decided, then and there, he never was going to keep books again.

He began selling trucks and trailers in the area from Eugene on South.

In the wake of Pearl Harbor, the government froze the nation's inventory of heavy trucks. There were a lot of truck sales available but only a skimpy 25,000 trucks were available for civilian use in the whole United States. The armed forces had commandeered most truck manufacture for ordnance and other war use. For civilian truck

use, one had to apply to the War Production Board for approval to buy a truck by filing Allocation Form No. PD25A. It took extensive proof of critical civilian need before the War Production Board would issue an allocation.

That first application to the War Production Board for the Rosboro job took 28 pages to build a case for a release for the six units. Charlie drew maps and presented dramatic data of old Rosboro trucks "chugging" up the hills with their engines steaming.

Even the White trucks' Hotchkiss Drive and Spring Suspensions were inadequate to handle the brake torque encountered on those tough logging roads. The brackets for the brake torque rods were not available as a factory installation so Charlie had them made at a local foundry in Vancouver and installed them himself to stabilize the rear ends.

Sikes wrote letters to sawmill operators and logging contractors, mostly in southwest Oregon: "How can we get more White trucks to haul our logs? Now we can tell you." He said he could get allocations from the Office of Defense Transportation and War Production Board. These agencies had just decided that lumber, machinery, steel and petroleum were needed for war ships, housing, shipping crates and thousands of other items. Logs were needed to make the lumber.

Each time he would obtain an order for trucks he went through a set ritual. He would work up the release papers, do the paper work for the bank loans, bring the trucks into the shop, put on his coveralls, install the brackets and torque rods and, beginning the next week, be on the road again for more truck sales.

Footnote

(1) See Chapter 20, "R.H. Spear", Chapter 21, "Out to Launch", and Chapter 27, "Movers and Shakers".

— The Gunderson Gunners —

Chapter 5

"Son-Of-A-Gun" goes to war

In January, 1943 Al and Chet Gunderson decided to publish a company newspaper. A contest was held to select a name for the biweekly. Bill Smith, a welder, was the winner with the name, the *Gunderson Gunner*, (the *Gunner*). He was awarded Five dollars in war stamps which could be applied to the purchase of a $25 war bond.

The *Gunderson Gunner*

The brothers hired William F. Selleck to edit and publish the paper. He also served as its photographer. Other photographers who supplied pictorial information were Ackroyd Photography, Lawrence Barber and Photo Arts Commercial.

The first issue of the *Gunner* was published January 28, 1943. It arrived every other Thursday until the war ended. Beneath the title there was an ocean scene showing several Gunderson-built landing barges on a heavy sea. Warships in the background traversed a horizon filled with explosions from naval warfare.

The first cover showed a war-helmeted, new-born baby parachuting from the sky and firing a machine gun. His face, all business, seemed to query, "And what're you doing to help out?" The first headline read, "'Son-Of-A-Gun' Goes To Work."

The phrase, "son-of-a-gun" is an old naval expression. At one time sailors in the British Navy were allowed to have their wives sail with them. The term applies to children born alongside a ship's gun.

Informs employees what's going on

Through this publication, Gunderson was able to inform workers of the rapidly changing business of the company, to process and end rumors and to clarify the news. The organ provided information to the employees on health, safety, job training, rationing and taxes. They could also coordinate and publicize the activities at their three plants in Linnton, Front Avenue and uptown at 225 N. W. Everett Street.

An idea contest began at the same time as the paper so it was a good place to publish and discuss the merits of the suggestions made.

Several employees on the swing shift suggested a need for an American flag to fly over the plant since, "This 100% American plant (not an alien on the payroll) doesn't yet have a flag." Old Glory was run up the new pole in short order.

Even unwelcome news appeared, especially when the government announced that on July 1, 1943 every worker-taxpayer would henceforth pay his taxes in advance through the payroll deduction plan. The caption above a smiling Uncle Sam read, "Pay your taxes here...use our easy payment plan." R. H. Spear, Controller at the time, had the unpopular duty of implementing the new tax law at Gunderson. The practice of withholding of taxes exists to the present time. In 1944, another news item told of Oregon's new Financial Responsibility Law making it mandatory for every car owner to carry insurance to protect "the other guy's" life, car and property. A great many car owners hadn't been doing so at the time of its announcement.

On the lighter side

The *Gunner* featured a column entitled, "On the Lighter Side." (The word "Lighter" referred to the Tank Lighters or LCM Landing Barges being built by Gunderson during World War II. See Footnote No. 1.) There were usually ten or so anecdotes in the column. One of these concerned an Eastern newsman who had heard about how Gunderson started some of its boats upside down in the early building process. He figured, "This way, the night shift can be shaken out instead of being taken 75 miles out to sea." It was a reference to Gunderson's speedy building and delivery of boats to the Navy.

Another item featured an anxious boat sponsor awaiting the start of the launching ceremony. She cried out, "Five minutes to go and still no ship." A wise old foreman answered, "Start swinging, sister; it'll be there." Courtships, marriages and births were announced in the column. Another column voiced concern about the postwar world: "How are we going to get 'the little woman' back into the kitchen after making $1.20 an hour as a welder." Someone answered, "Put a welding shop in every kitchen."

In May, 1944 the *Gunner* printed a humorous piece entitled, "A Foreman Defined." It said he has: "The curiosity of a cat. The tenacity of a bulldog. The determination of a cab driver. The diplomacy of a wayward husband. The patience of a self- sacrificing wife. The enthusiasm of a jitterbug. The friendliness of a child. The good humor of an idiot. The simplicity of a jackass. The assurance of a college boy. The tireless energy of a collector of past due bills."

"Rosie the Riveter"

In a recent series of historic articles published in the *Wall Street Journal*, the paper told how the 1943 song, "Rosie the Riveter", "Caught the spirit of the millions of women who joined men in a war production effort that united the country as never before. The Rosies and Joes with their rivet guns and welding irons responded. Wracked by the Depression and disunity a few years earlier, the country now seemed of a single will to get the job done."

Those who remained on the home front did not question an all out war effort. The idea of waging a war on America's enemies was unanimous. A single purpose was justified. Everyone looked for a place where he could use some muscle to help win the war. At Gunderson the air was charged with positive particles that brought everyone together in a common, ultimate effort.

Materials were scarce

At the Linnton plant, when World War II began, steel and most all other materials became very scarce due to their diversion from civilian to defense use.

To alleviate the situation, I decided to look for used steel and materials. During the next several months, I foraged through the mountains of steel scrap at the junk yards.

I managed to find steel to keep that activity going. After a while, though, my choices narrowed down to very rusty and pitted steel so I decided to discontinue the risky practice for fear of equipment failure.

Later, during the war, the War Production Board, which controlled the distribution of material to America's industries, saw that there was a need for commercial transportation equipment for hauling both domestic and war materials over the nation's highways; they supplied the needed priorities with which to secure steel to continue this segment of the business.

While there were high defense priorities for defense work, there wasn't enough steel for their continuing domestic lines such as trailers, tanks and sawmill work.

The war machine of the United States had an enormous appetite. Its need for guns, planes, ships, tanks, ordnance, uniforms, shoes and food drained the nation's storehouse of supplies and left little for civilian use. Shortages of everything–chrome, rubber, steel, tin, tools, zinc and even wiping rags–hindered the accumulation of supplies with which to build its war machines.

Ladies' hose used as paints strainers

Paint strainers were scarce, so an appeal went out for ladies' hose which did the job as well as the real thing. Automobiles were no longer in production–even auto parts were being funneled into the army. Liquor was rationed to a pint a week.

Priority system implemented

A priority system was implemented by the government through the War Production Board, an agency created to control all materials. Gunderson was building tank lighters, lifeboats and other defense equipment, so it received the highest priorities to buy material. Gunderson was able to get most of its presses, shears, steel and welding machines quite promptly with those priorities. Bridge cranes and material handling equipment were in such high demand that the company was forced to go into the second hand market for them. Gunderson purchased used "Cherrypickers", (lift trucks, the forerunners of the Hyster Karry Kranes) and winches from the logging camps with which to make hoists. The Gunderson crew made most of the jigs and fixtures that were needed. If the jigs were made of steel, the steel generally came from the scrap pile.

Gunderson continued to build logging and highway trailers during the war. The company received a priority to buy wheels, tires, axles, brakes and the steel to build them because the trailers were considered essential to war effort transportation.

Rubber tires and gasoline rationed

Among the severest of shortages was rubber tires. Prior to the development of a synthetic substitute, natural rubber came from Southeast Asia, West Africa and South America. But the Japanese shut off the supply from the Malay states and Indonesia in 1942 and 1943. Although synthetic rubber was formulated in 1927 by Goodyear Tire and Rubber Company, it was not mass produced until 1943 and then not in sufficient quantity to offset the loss of crude rubber from the main sources in Asia which were under siege by Japanese forces. The *Wall Street Journal* series, previously mentioned, went on to say, "While waiting for the new ersatz tires the country made do with reclaimed rubber. It wasn't easy. In 1943, William Jeffers, a railroad executive who was rubber director for the War Production Board, described how tight things were, 'By 1944,' he said, 'the country will have gone two years with less than one quarter of the normal replacement of tires.' Jeffers called for five million new tires for 'essential drivers'. Jeffers got his wish. By 1946 synthetic production equaled the total natural rubber consumed by the U.S. in 1941. Synthetics had become a permanent part of American life."

The largest, most rugged tires went to Army trucks and heavy ordnance trailers meant for carrying such equipment as the earth- moving, "Sea-Bees" Caterpillar tractors. Regardless of the scarcity, the War Production Board also allocated tires to commercial vehicle use because of the need to transport the enormous amounts of defense goods. The small amount of tires left over went to civilian use. Because "the squeaky wheel gets the grease", Gunderson managed to get enough tires to get the job done.

Tires for personal use were rationed and tied to gas rationing. In July, 1943 the Office of Price Administration, (O.P.A.) urged everyone to conserve rubber by eliminating

unnecessary travel, checking wheel alignment frequently, avoiding quick starts and stops and driving less than 35 miles per hour.

Gas rationing in Oregon's "A" ration book, gave a worker enough gas for 60 miles a month for basic job needs plus 120 miles per month for driving for the family needs. If one were highly essential or lived further away, the "B" book contained ration tickets for 360 miles per month. Additional coupons were difficult to obtain unless the extra mileage was essential or membership in a bona-fide ride-sharing club could be proven. If one resided within walking distance of 1-1/2 to 2 miles from work, no gas coupons beyond the family ration were issued. "Essential" meant being on call for maintenance at night, or needing a car to go long distances to pick up parts. Doctors, dentists, nurses and hospital workers were essential. A plant manager or business owner that had to travel to distant cities for meetings or government related functions was essential. The *Gunner*, poking fun at Frank Ellison's Crosley automobile said, "It is not so funny any more. It gets 50 miles to the gallon of gas so he has to keep it running all night to use up his "A" ration card."

The Council Crest electric trolley car was running at this time. The *Gunner* joked that Don Law, purchasing agent for the Lifeboat Division, rode it every day and, being a nervous type anyway, jumped for the hand brake if the street car exceeded five miles an hour coming down Vista Avenue.

Persons traveling 610 miles or more per month were entitled to buy a grade one tire (the best available). If one traveled less than that he would have to be content with lower grade tires or recaps. Tires had to be inspected every three or four months depending on the type of ration book one had. In August, 1945, the *Gunner* editor quipped, "This week's irony is found in the OPA's removal of gas rationing just when our tires are too thin to run an extra five gallons' worth."

Birth of "Ride Share" idea

Many of the employees got together and organized "ride share". In August, 1945 the O. P. A. awarded Gunderson a handsome citation recognizing it as one of only eight firms in Oregon for sharing rides to save gasoline and tires. Etiquette in ride-sharing mainly consisted of good manners, cost-sharing, promptness, consideration, communication, good car maintenance and careful driving.

After the war it was thought there would never be a need to skimp on gasoline again. But a rude reawakening to America's dependency on foreign supplies of petroleum came when the Organization of Petroleum Exportating States (OPEC) curtailed production, causing gasoline shortages and inflation several decades later.

Guns and butter

When the task of making guns was added to that of making butter, labor became a scarce component. Auto mechanics, farm hands, housewives, retail clerks, stenographers and stockbrokers left what they were doing. In short order, they became boilermakers, burners, chippers, carpenters, fitters, grinders, helpers, laborers, painters, and welders. During peacetime the process of learning a trade took months, but when the war began these arts were learned rapidly. A lot of lessons were learned through trial and error. In June, 1943 Gunderson offered a $25 war bond to anybody who recruited a new worker. The need for welders was so critical in 1943 that Gunderson established a welding school. Trainees were paid 95 cents per hour during their thirty day training period then $1.05 an hour during their shop experience trials. When they became Journeymen welders they moved up to $1.20 per hour.

In July, 1943, to stir up interest in Gunderson and to recruit new people, Gunderson sponsored a radio show each Saturday night at 7:45 P. M., called "Behind the Victory Headlines." It dramatized the news highlights of the week and featured prize winning articles by Gunderson employees titled, "Why I Like To Work At Gundersons'."

All worked on labor day

On Labor day in 1943 everyone worked. A machinist, F. W. Bradley, declared, "My boy isn't getting the day off, why should I?" Enid Bird of Personnel said, "I don't imagine that the boys in the South Pacific get the day off either."

In the *Gunner*, there was a column written by L. S. "Stan" Baier, Plant Manager. It was titled, "Fore And Aft, By The Gaffer."

On September 9, 1943, the Gaffer wrote an eloquent tribute to American labor. It is quoted:

"Labor Day this year was 'celebrated' by workmen all over the nation by staying on the job and giving the men on the fighting fronts the ships and munitions they need to finish their job as quickly as possible. Until the Axis is defeated every day will be Labor Day. The President of the United States has asked in his Labor Day address to increase the output of shipyards and factories all over the nation. No one realizes more how much we have to do to win the war than the President. Every day it is prolonged will add millions in cost for future generations to pay, but this is nothing compared to the lives of our fighting men. Money cannot bring back sons, brothers and fathers who have given their lives on the battle lines so that we in America can continue to have free enterprise and free labor.

"Free labor and management working hand in hand has demonstrated that it can outproduce anything the Axis can show with its slave labor. American labor, being free labor, does not have to be driven, but can, of its own volition, grasp the gravity of the situation the nation faces and give their best in brawn and brains to accomplish a task, the magnitude of which has never been undertaken by any people anywhere."

What a beautiful tribute to America, its workmen and the blessed freedoms we enjoy.

Labor unions bent rules

Labor unions even bent their work rules. The International Brotherhood of Boilermakers, Iron Shipbuilders and Helpers of America passed a resolution for the duration known as the Interchaneability Clause. The agreement recognized a shortage of labor and the need for all boilermakers to be as versatile as possible. In it the union dropped the bars limiting a worker's scope of work and use of tools. It permitted a worker to perform more than one craft at a time to complete a task without delay. This meant that if a welder wanted to pick up a paint brush he could. Other unions went along, too. If a carpenter wanted to move some material or bend a piece of metal, he could. This was a radical departure from the norm of union rules. The main intent was to speed up the production effort.

When worker shortages were severe enough, the War Mobilization Office would arrange with other yards to loan workers to Gunderson. In one instance, Albina Engine & Machine Works and Willamette Iron & Steel Co. loaned Gunderson 20 good mechanics.

Women's facilities needed

Women hadn't worked before in the Gunderson plants. With the addition of so many women to the Gunderson ranks, it wasn't long before the facilities for women were woefully inadequate. There is no record of any woman ever having worked in the Linnton

production plant as long as it existed. One, Louise Sullivan had worked in the Linnton office as a dispatcher for Mogul Transportation Co. One issue of the *Gunner* tells of 144 lockers and restroom facilities being provided for the women of Gunderson at the Front Avenue plant. On June 3, 1943, two women were appointed "leadwomen". This caused quite a stir. Bill Selleck, publisher of the *Gunner*, said he didn't see anything unusual about it, "Maybe the man in the house wears the pants but the little woman tells him what pair to put on." When the locker room was completed the *Gunner* quipped, "That embarrassing question of where a young chick's to go to change out of work clothes into little pink things they wear neared a solution this week at Gunderson's as carpenters and painters put the finishing touches on a flossy new locker room for the exclusive use of the feminine trade."

The *Gunner* carried many photos of women at work in the shops of Gunderson. Bette Corder and Ilene Rutledge rigged 52 lifeboats a day while Mary Strother and Lilian Frei handled everything from big propellers to welding rod in the parts warehouse. The "First Lady" of welding at Front Avenue was Virginia Kilgore, who said she loved her job. Della Jenkins and Erma Ladd, with sharp knives, trimmed the canvas on lifeboat hulls. Ruby Ellison whipped and spliced the 22 different rope assemblies such as painters, stays and other lines needed for each lifeboat. (See Footnote 2) No figures were given on the number of women in the plant, but it is estimated that almost 200 were at work there.

Health dispensary

The new health dispensary, a term coined by the State Industrial Accident Commission, was introduced in the very first issue of the *Gunner* on January 28, 1943. Minor abrasions were treated and bandaged there. Mrs. Marjorie Alberts, Graduate Nurse, managed the dispensary days while Lloyd Townsend of the Lighter Division and Henry Heckley of the Lifeboat Division handled the swing shift. Most of the Security guards were graduate First Aid men, ready to cope with emergencies.

The Gunderson plants had to be protected for security. The American Detective Agency, headed up by William "Bill" Cline, was engaged to provide patrols around the clock. He was the ideal counterpart of today's tough and clever TV sleuths.

"The Gaffer" often stressed how to do the job and how to do it safely. He complimented and encouraged the workers. Occasionally he would issue a reprimand on absenteeism or failure to keep pace. He was a superb leader and motivator. L. S. Baier, whose byline was "The Gaffer", held dinner meetings at the old Multnomah Hotel where all superintendents, foremen and leadmen from all shifts and crafts could get together and discuss how to improve quality, production and safety.

Absenteeism same as deserting

Absenteeism was a constant problem. Being absent from work was considered as bad as being A.W.O.L. from the army. Taking a day off was labeled "deserting" in a the *Gunner* ad, June 17, 1943. The ad was picked up by the press and re-printed widely throughout the country.

Toward the end of 1944 and into early 1945 the progress of the war turned positive. Workers began to look elsewhere for more permanent, peacetime work as the defense effort wound down. Some even asked for extra gas rations in order to get to their new jobs in other cities. This caused severe disruption in production. In September, 1944, an add in The Gunner shows a man hanging a victory sign with a brush and bucket of paste with the caption, "Finish the job by sticking to yours."

Fridays and Saturdays were the worst absentee days. Take Friday off and one had a three day week end to fish, hunt or just rest. They were, at the same time, the days when most product deliveries were scheduled. Invariably the disruption would cause overtime and increased costs. Extra costs aside, the delay in getting the material off to the armed forces was considered inexcusable. Fortunately the overwhelming majority stayed on the job and simply doubled their efforts to ship equipment on time.

The Fifth Column

Rumors were rampant. Initiated by the enemy and uninformed or malicious civilians, this activity became known as "The Fifth Column". The result of the rumors was to demoralize the workers and the public. It was said that the clandestine members of The Fifth Column were working for Hitler and Tojo trying to learn how and where the country's war machines were being built, and when and where they were destined to go. Determining the location, size and the description of the facilities with photos was the job of The Fifth Column. The term, "Fifth Column", originated during the Spanish Civil War when sympathizers within Madrid aided the four Nationalist columns advancing on the city. It pertains to agents and sympathizers of one side in a war engaged in subversion and sabotage in the home territory of the other side.

They could hit the jackpot if they could find out how to copy guns and ordnance. They operated a vast information collection system. A little information here and some there pieced together might reveal a troop movement or some other vital activity. The correct information might result in sabotage. Some of the slogans for war secrecy were: "Keep it under your hat," "Keep Portland mum," "Give no information on sailing time, directions, cargoes, convoys, troop movements, destinations, cruising speeds and war production," or "Loose talk invites saboteurs."

In June 1943 the Federal Bureau of Investigation (FBI) set up committees in the factories to seek out the sources of rumors and to set the facts straight. It asked Gunderson men and women to increase their vigilance against enemy agents and promptly report any suspicious acts. Portland's number one 'G' man kept his office in the Federal Court House open 24 hours daily following up reports of espionage and sabotage.

Pacific Coast shipyards had several suspicious intruders who were picked up and taken to the FBI. One trespasser was found to be an enemy alien and a German storm trooper. He was held for ultimate deportation to Germany. An alert citizen reported a man in the act of purchasing a large number of aerial photographs. The FBI was able to identify the individual as an important cog in an espionage ring. Aerial photos, blueprints of defense equipment and equipment operating instructions could be valuable to the enemy. The saboteurs resorted to arson, breaking of machinery, derailing of trains and causing plant slow-downs; anything to slow down the war effort.

Even weather reporting was withheld from the *Gunner* until it was permitted by the War Mobilization Board, who had responsibility for censorship of the news, permitted it. In the June 1943 issue of the *Gunner*, Bill Selleck joked, "Reports about last January's weather were finally OK'd for publication."

A joke moving around in December, 1943 was printed in the *Gunner* and went as follows: "Seems Radio Tokyo thinks America has surrendered and is disarming because all they hear from American Radios is, 'Lay That Pistol Down,'" (A big song hit at that time.)

During World War II all workers were required to carry a U. S. Coast Guard identification card. Otherwise they could not enter the restricted waterfront area. The card included one's name, address and his fingerprint.

Navy Supervisor of Shipbuilding

The U. S. Navy established a large office in the Portland area on the second floor of neighboring Willamette Iron & Steel's building on Front Avenue. It was known as the Supervisor of Shipbuilding. Headed up by Captain Leland D. Whitgrove, its function was to track progress and control quality on various projects.

The Navy swamped Gunderson with requirements for reports on the status of materials at source, labor force, priorities and progress. They issued priorities for precious steel and other materials. They processed progress payments for the Navy work based on the amount of steel on hand for the job, and on the percentage of completion at various stages of construction.

Whitgrove and his inspectors insisted on top quality work. He was called upon to arbitrate some of the inspection decisions that, in Gunderson's view, were unreasonable at times. He was the first to commend the Gunderson yard for high quality work and speedy delivery.

His assistant supervisor at the Gunderson plant was Lieutenant Commander James L. Braun. Braun was assigned to Gunderson in December, 1943. He made many friends during his service there while maintaining a firm but fair relationship. Assisting on welding inspection was Chief Specialist Clark M. Brothers. Lt. David Sutherland inspected the paint jobs and measured the coating depth with a thickness gauge.

These Naval representatives, through their firm and fair guidance, were instrumental in helping Gunderson acquire several, coveted Navy awards.

Portland-Vancouver became huge shipbuilding area

The Portland-Vancouver area became an enormous shipbuilding center. Beginning in 1941, Henry J. Kaiser founded three shipyards, the Oregon Shipbuilding Corp., Swan island Shipyard and Vancouver Shipyard. Kaiser, in his sixties, and his son Edgar, in his thirties, built 746 ocean-going Liberty Ships, Victory ships, aircraft carriers and various other transport vessels for the United States government. Henry J. Kaiser's Columbia Construction Co. previously had built the Bonneville and Grand Coulee Dams from 1933 through 1943 during President Roosevelt's "New Deal" era. It was these projects that helped Kaiser develop his production and labor management know-how. Other shipyards were: Albina Engine & Machine Works, The Commercial Iron Works and Willamette Iron & Steel Corporation. Gunderson's Linnton plant subcontracted to all of these shipyards.

In the last week of October, 1943 Portland newspapers announced that Portland shipyards had completed their 500th vessel. This included tugboats, liberty ships and victory ships. Meanwhile, Gunderson had delivered the 2,248th lifeboat and nearly 200 LCM Landing Craft and the ten new "mystery ships" later revealed as LCC's, (Landing Craft Control.). The numbers of LCM Landing Craft were kept secret until several months later.

The victory gardens

Civilians pulled together in many ways to ease the shortage of food and supplies. Farmers were shorthanded because many of their men and women were at war, so produce was scarce. Victory gardens became popular. The company paper published "7 Steps To Your Victory Garden." They were, "Plan your garden, choose good soil, fertilize well, keep down weeds, use basic tools, fight insects and water well in dry spell."

There were gardens everywhere in those days. On one of the golf courses in Portland where I played golf, there was a large garden of corn, potatoes, tomatoes and vegetables.

It was a par 4 hole and when I "sliced" my tee shot out-of bounds to the right, I could stock up on tomatoes while looking for my ball.

Raising money to pay for the war

Throughout the war years there was a tremendous, nationwide effort to raise money to help finance the war by selling interest-bearing war bonds. The slogan, "If you can't shoulder a gun, shoulder the cost of one–BUY WAR BONDS", appeared in the first issue of the *Gunner.*

The seven oversubscribed war bond drives at the Gunderson operations raised almost two million dollars, or an average of about $2,000 per employee. The bonds, in dollar denominations of 25, 50, 100, 500 and 1,000 paid a yearly rate of 2.9% interest compounded semi-annually, if held to a maturity of 10 years, or only 2% if held for 5 years. A sales pitch at the time compared that rate to the current rate of 1% on commercial bank savings accounts! Another sales pitch used in an ad went like this, "Want a new car? Just sixteen $18.75 War Bonds bought today will pay for your new car tomorrow."

Mr. Raymond H. Spear, Controller, spearheaded the bond drives. Invariably, he and his committees conceived novel ideas that helped push Gunderson over the top of its sales quotas. One of these ideas, to help sell bonds, was the drive to buy imaginary cans of poison for the axis, Japan and Germany. Shown in the *Gunner*, the cans of poison came in three economical sizes and were labeled, "MADE IN U.S.A., PACKED BY GUNDERSON BROTHERS, PORTLAND, OREGON." The sizes available were: the "Single Dose, $18.75", the "Standard Size, $37.50" and the "Family Economy Size, $75.00". These represented three denominations of war bonds. The feared scull and cross bones adorned the can labels which claimed that the fictitious preparation was absolute death to the Axis enemy, Japan and Germany.

One employee, Paul Galanis, born in Greece "57 years ago" was honored February 3, 1944 for being a big buyer of bonds. He had already bought $3,650 in the first four drives. He had not missed a single day's work in two and a half years of employment.

Gunderson's quota for the Fifth War Loan, which was well exceeded, was $88,500, enough to pay for a Gruman Hellcat (F6F), single propeller, single wing airplane, the first new American Fighter plane to be developed out of actual combat experience in World War II. The *Gunner*, in announcing that the drive was topped, added, "Also enough fuel to send the plane around the world if need be." This fifth war loan drive at Gunderson was so enthusiastically oversubscribed that Gunderson was the first company in the nation to "go over the top".

To give each of the campaigns some spark and incentive the two Gunderson brothers contributed a lottery prize of over $1000 in war bonds for the winning lottery ticket at the end of the drive.

Competition between teams was encouraged as a means to get more clout into the war loan drives. During the Fifth War Loan drive, Al and Chet Gunderson each headed teams of workers selling the bonds. At the end of the drive, the winning team enjoyed a dinner of champagne and turkey. The losers, Al's sales team, were served beans and coffee. After a discreet time of hilarity, Chet's winning team voted to serve the losers champagne and turkey. After all, they too, had raised a considerable sum for the defense effort.

The Seventh and last War Loan Drive of World War II got off to a good start after Admiral William F. "Bull" Halsey, whose 3rd Fleet helped destroy the Japanese fleet at Leyte Gulf in 1944, told of his desire to ride Hirohito's fine white horse, "Shirayuki".

The *Gunner* editor advertised, "It's time to get Hirohito off his high horse and give Admiral Halsey a ride."

Blood, cigarettes and the news sent to G. I. Joes

There were drives for The Red Cross War Fund, March of Dimes, recycling of Christmas Cards for the Shriner's Hospital For Crippled Children and blood-giving drives many of which continue today.

Gunderson employees unselfishly responded to the need for blood for the country's wounded servicemen and women. The American Red Cross made regular calls at the Gunderson plant and drew blood by the gallon to be converted into blood plasma for shipment to the armed forces field hospitals all over the world where it could be mixed with water to save the lives of the critically wounded.

Membership in "The Gallon Club" was commonplace. Several donated more than five gallons of the vital fluid. At one point in 1943, the Red Cross said that they needed 5,300,000 pints of blood. Before giving blood, the Red Cross recommended fasting for six hour prior to donating. For the hour before donating, black coffee without cream or sugar, dry toast without butter, stewed or fresh fruit or fruit juice were permitted.

In the January 20, 1944 issue of the *Gunner*, George H. Buckler, a prominent Portland businessman and general chairman of the $100,000 Infantile Paralysis campaign exhorted Gunderson Workers to "go over the top" of their assigned quota to which the people at Gunderson rose to the challenge and did their share to combat the disease. Polio had not yet been conquered but a few years later it was.

Gunderson employees were sensitive to the needs of servicemen and women overseas. On several occasions they bought and shipped large quantities of cigarettes to the war fronts. R. J. Reynolds Tobacco Co., maker of Camel cigarettes, gave a deal of $1.50 per carton of ten packs – to be smoked – and they to ship an additional seven packs to the battlefronts. If Gunderson employees tossed in their our own carton, the tobacco company added two cartons to the shipment. After a two week sales campaign in May, 1943, 255,120 cigarettes went to war from Gunderson workers. In January, 1944 another 200,000 smokes were sent.

On another occasion, Chet Gunderson and Union Local 235 sponsored a dance at the Union Hall. The admission to this dance was a carton of cigarettes. Servicemen were 24,000 cigarettes richer as a result of that fun evening. Along with each carton went a message, "Hi fellas–good smoking from Gunderson Bros. Portland, OR. builders of lifeboats and invasion barges."

Cigarettes became scarce and the *Gunner* reported that one smoker complained, "Talk about shortages! The signs which now are common, 'no cigarettes today' are being changed to, 'No cigarettes tomorrow.'" The cigarettes went to New Guinea, North Africa, Merchant Marine vessels on the high seas, marines and wounded soldiers in the South Pacific and soldiers and wounded in the Aleutian Islands.

The G. I. Joes in the battle areas were short of reading material. Permission was received from the navy to include magazines and books in the nooks and crannies inside shipping crates to help overcome the shortage of reading material. The *Gunner* requested, "Magazines shall be tied in small bundles, not over 10 pounds, and deposited near the dispensary at Front Avenue. Crating crews will take care of putting them into big boxes taking LCM's to all parts of the globe." Mailing of bulky magazines overseas was prohibited in most cases due to the difficulties of shipment. In the Gunderson plan, no added space was needed.

Entertainment at home

The Gundersons responded to every community want and need. They fabricated steel framework for a float for the Rose Festival Association.

From the late 30's on, they supported company baseball, basketball, bowling, golf and softball with generous contributions for uniforms, equipment and cash prizes.

The old Portland Bowling Alley in downtown Portland was the scene of the Automotive league in 1940. At that time, pinsetting was performed manually. There was a pinsetter that worked down in the end of the alley behind the triangle of pins. He watched for the ball to be thrown and as it rolled down the lane toward the pins, he lifted his feet and legs up and away from the flying pins. After the pins stopped flying and spinning, he lowered his legs, picked up the pins and re-set them. Some pin-setters did a little imbibing and could not react fast enough to keep from being bruised once in a while. At the end of the season, the prize money was handed out to the teams according to their standings and divided up amongst the team members. Some of the bowlers at the Linnton plant were Frank Stump, Shop Foreman, Otto Melton, "Easy" Mc Dowell, Fred Shackman, Ed Badgley, J. Douglas, Benny Richardson and Benny Lundquist. At the Front Avenue plant some of the "hot-shots" were Everett Hill, Roy Donaldson, Harry Biancone and Ralph McClellan.

To relieve the pressure of the long, 48 hour work weeks, there were plenty of relaxing times. Gunderson knitted its work force together and kept up its enthusiasm by putting on entertainment during lunch hours, hosting company dinners and picnics.

During the lunch hours there was always music and entertainment. There were twenty-two low level public address speakers placed throughout the plant so the employees could listen to radio stations KGW and KOIN flash the latest news as it happened. At that time, KGW had a news editor by the name of Lawson McCall, who later used the name "Tom". A later generation knew him as a beloved Governor, statesman and news commentator. Dean Collins was the announcer at KOIN.

Herman Lummus, a one-man band, and Cliff Ackley with his "Geetar" played frequently. There was an old upright piano out on the shop floor, on which I loved to play my own brand of jazz, once in awhile. There were "The Tank Lighter Hillbillies," with Ackley, his sister Mabel, and Ernie Boggs on guitars, while Pearl Rude sang the vocals and added to the group's harmony with her mouth organ. Young Nelda and Buddy Dahlgren serenaded a noon hour crowd with their trumpet and clarinet then Lois Dotson played a saxophone solo. The entertainment committee at the time consisted of Bill Lane, Chairman, George Miller of the machinists, Huey Hughes, from the paint shop, Julian Broadbent of the welders, Carl Martin from the chippers and burners, Betty Corder of lifeboats, Del Rice of the electrical workers, Bill Backus representing the shipfitters and Lou Carpenter of the scalers.

The granddaddy of all company picnics was held at the Oaks Park on Sunday, June 4, 1944. The hosts were Al and Chet Gunderson. Hot dogs, beer, soft drinks and ice cream were served, but the committee recommended that mothers of small children bring along any special diets their children might require. There was a softball game between the Linnton and Front Avenue plants. Races for children and adults in potato sacks and the egg toss provided a laugh for the onlookers. A good reason for attending that picnic was that the park could be reached directly by street car (electric inter-urban trolley) from Portland, Gresham, Estacada and Oregon City. Cars left directly for the park every 15 minutes from Southwest First and Washington Streets and from Southeast Water Street and Hawthorne Boulevard.

There was a company picnic at Roamer's Rest in July, 1945. Nearly 2000 Gunderson employees and their families attended. There were "Tugs-O-War", slipper-kicking and the usual funny races.

Another picnic was held at Damon Trout's retreat in Vernonia. He owned a marine electrical firm that subcontracted electrical work from the shipyards. At his park, he featured an old railroad caboose which rolled on a length of track. In one of the foot races, one diligent but slightly inebriated racer ran head down and head first into the caboose's hard side. Fortunately, the collision was not severe enough to crush his scull, only enough to induce a brief nap.

One Christmas season the brothers hosted a banquet and dance at the grand Multnomah Hotel's ballroom. There was a full size life boat, fully rigged, sailing on the long, head table. Separately, a party was held in the life boat loft for the children of the workers. They heard Christmas Carols and received gifts.

Ideas benefit production, quality and safety

In February, 1943 the company initiated an idea system throughout the company in which they agreed to pay $5 for each suggestion worth using. Through the ensuing months hundreds of winning ideas were submitted. They contributed to a safer work place, upgraded quality, conservation of scarce materials and a speed-up of deliveries. After two years. someone counted the number of ideas submitted at over 8,300.

One suggestion was the use of sponges, instead of hard-to-find ordinary clothes rags, to soak up the water in the boat bilges prior to painting. Another resulted in the placing of whistles in the bridge cranes to prevent injuries on the floor below the swinging loads. Later these whistles were replaced by bells and gongs which were easier to discriminate. There were some who collected five "fish" ($5) quite often as did Leighton Johnson, Whitney Hastings, Chuck Medak and Louis "Babe" Dillman. Leighton won so many idea awards that he suggested that the Gunner use old pictures because, "I'm getting blind with those flashes!"

By May of 1943 Benny Richardson had submitted so many winning ideas that he was finally recognized for his genius. He was given an exclusive job as an innovator–solely to develop ideas that improved the work place and production. He came up with some fine gadgets. One was a clamping fixture for installing stem and stern irons tightly on the lifeboats. Another was a device for locking the wheels on the rotating boat-building frames to keep them from rolling, a safety hazard to welders and fitters. Benny left a legacy of production improvements. He was the forerunner of today's Methods and Industrial Engineer except he didn't have the title or degree.

Life insurance provided to employees

In May, 1943 life insurance was provided for the first time at Gunderson by the Aetna Life Insurance Company. This program was administered by Carl Gray, a good friend of the two brothers. Persons earning less than $1.00 per hour could receive $1,000 life insurance with double indemnity or fifteen weeks' disability pay. Those earning between $1.00 and $1.20 per hour received $1,500 life insurance with double indemnity or 20 weeks' disability. But the big earners making over $1.20 per hour were placed in the $2,000 bracket or 30 weeks' disability. There was no health or medical insurance coverage as of that time.

Poor man's Arlington Club

Workers at the Linnton plant had a favorite place for lunch, "Pat's Lunch". Al and Chet, Gene Hillstrom, who was a male stenographer; Leighton W. Johnson, Engineer; Tom Larsen, Plant Manager; Adolph Strid, Plant Superintendent and others loved to go there. (No female secretaries were employed at the Linnton offices. Jimmy Ince preceded Hillstrom until he was inducted into the armed forces in April 1943.)

Pat's Lunch was owned by Pat and Alice Clarizio. Pat waited on the counter and took in the money at the cash register. No one could escape his watchful eye. Alice cooked all morning, dished up the food and served it to the booths. Her spaghetti and meatballs, ravioli and Hungarian goulash were simply wonderful. So was her smile and her cheerful disposition. The lunch hour was a busy two hours and if one didn't get there well before 12:00 noon, there was a half hour wait before sitting down and ordering.

Pat's Lunch was on the west side of St. Helens Road in "downtown" Linnton, a little north from Marinelli's barber shop on the east side of the street. Any knowledge gained from a business lunch could be vastly increased by having one of the Marinelli brothers cut your hair.

Hugh Ackroyd, a professional photographer, whose office was located on Yeon Avenue, also lunched there for years. Reminiscing about Pat's, he said that a favorite nickname for the restaurant was, "the Poor Man's Arlington Club". A great many blue and white collar workers congregated there. In addition to Al and Chet, most other top execs in the area ate at Pat's Lunch.

When the State Highway Division widened the road through Linnton, they took out the whole west side of the Linnton business district including Pat's Lunch, the pool hall and the liquor store. They took away a part of the past. They left only the fond memories of Pat and Alice and many a game of snooker and rotation next door, after the day's work. Gene Hillstorm, Pat Patitucci, John Carlson and the I were regulars at the pool hall.

The first of dozens of lift trucks was bought from the Towmotor Company. Although subsequently, most of Gunderson's lift trucks were bought from Hyster Company, the word "towmotor" stuck for several years as the identifier for all lift trucks. The superb "Hyster" struggled for years to disassociate the "towmotor" from its name. It was touted as "The handiest rig in the plant, getting into places that larger cranes couldn't squeeze into." It made possible the placing of material on wooden pallets; then the lift truck forks were inserted into slots in the pallets, the load lifted off the floor and trucked to another desired location. Like the lift trucks, another versatile mover of materials was the Hyster "Karry Krane". Bruno Jagelski was elated when he became the driver of the first Karry Krane purchased. It was the first of more than a hundred cranes and lift trucks purchased from Hyster. Previously, Bruno had been operating a hand made crane with a stationery boom mounted on the front of a truck.

Gunderson had good suppliers

Gunderson was fortunate to have excellent suppliers whose quality and prompt delivery contributed to its success. To mention a few of those suppliers, there were Acme Metal Works, Beebe & Company, Clark & Wilson Lumber Co., Eastern & Western Lumber Co., Grand Sheet Metal Works, Honeyman Hardware, Oregon Brass Works, Oregon Marine Supply Company, Pacific Machinery & Tool Steel Company, Ridgway Bros., and Woodbury & Co. For every vendor mentioned there were hundreds of others equally responsible for Gunderson's good record.

Oregon Brass Works, owned by the Prier family, supplied an infinite variety of marine and industrial brass castings. Though Gunderson was sometimes uncertain as to

the design of its castings, Art Prier would fill in the details for casting a sound, substantial part.

Ridgway Bros. supplied brass ships' steering wheels, and thousands of forged and machined parts for hatches, doors and scuttles. They had a cabinet maker who was an artist with wood. The mahogany steering wheels he fashioned around the bronze hubs were beautiful and became collector's items for those fortunate enough to find one after the war.

Sibley, Mac and Dale Smith, the owners of the Smith Brothers foundry that supplied brass and bronze castings, later became very successful in the office furniture and equipment business in Portland and San Francisco. The company still operates under the same name, although all three brothers are gone.

Awards and kudos

Gunderson men and women received several coveted awards in the form of flags and merit badges from the United States Army, Maritime Commission, Navy, Treasury Department and various other state and local agencies.

The first recognition came on August 4, 1943, from Admiral H. L. Vickery, Commissioner of the United States Maritime Commission, who awarded Gunderson the Maritime "M" pennant, the Victory Fleet Flag and Maritime Merit Badges for all employees. This was the highest tribute given any defense firm by that body.

On behalf of all of his fellow employees, Sam Tracey, Gunderson's oldest worker, received the first merit badge from C. E. Walsh, the Commission's Procurement Officer, during the formal award ceremony. Among the dignitaries who attended were the Honorable Earl S. Riley, Mayor of Portland and Robert Ferrell, Treasurer, State of Oregon.

In February 1944, August 1944 and April 1945 Vickery awarded six months' extensions in the form of a gold star which were sewn on the "M" Pennant.

On May 18, 1944 Under-Secretary Of The Navy James V. Forrestal notified C. E. Gunderson that Gunderson was awarded the Army-Navy "E" award for outstanding production of war materials. Accompanying the award, in recognition of "their high contribution to American freedom", was a flag to be flown above the plant and a lapel pin for all employees . It was a fitting tribute to the dedication and tireless efforts of all Gunderson employees. Captain Leland D. Whitgrove, Supervisor of Shipbuilding for Oregon, presented the pennant during the award ceremony on Friday June 2, 1944. Colonel Samuel D. Hayes, Commandant of Camp Adair represented the army on the occasion. David Dobbie, a welder, was elected by his fellow workers to accept the first lapel pin from Hays.

Gunderson was awarded a renewal of the Army-Navy "E" on November 16, 1944 in the form of a gold star to be added to the first pennant. It was permission to fly the flag for an additional six months. In giving the award, Admiral C. C. Bloch said, "Management and employees have indicated their determination and ability to support our fighting forces by supplying the equipment necessary for ultimate victory." He made a similar award on May 25, 1945.

Gunderson also received the Treasury "T" flag recognizing its men and women who invested more than 10% of their earnings in War Bonds. Gunderson became a member of "The Million Dollar Club" when its purchases reached a million dollars.

These pennants were displayed on a pole above a circular floral plot of ground near the commercial entrance to the plant. All of the pennants flew there for many years beneath "Old Glory". In addition to those flags, a duplicate of the Gundersons' yacht flag

flew there also. It was a triangular flag with broad, blue and white vertical stripes superimposed by sewn-in letters, "Gee Bee". The *Gunner*, on July 20, 1944, displayed a picture of the flag memorial showing Old Glory, the Maritime pennant, the Victory Fleet Flag, the Army-Navy "E" banner, The Treasury T flag and the Gee Bee house and yacht ensign.

Among a number of other tributes to Gunderson was the Rationing Award given by the Office of Price Administration (OPA) in August, 1945. It was a handsome citation recognizing the company as one of only eight firms in Oregon for ride-sharing amongst its employees. This effort saved hundreds of gallons of precious gasoline. The OPA was a government agency formed by President Roosevelt in 1942 to regulate rationing of commodities and to control prices and rents. This body was dissolved in 1945.

Footnotes:

(1) See Chapter 6, "Axis Smashers: Lighters"

(2) A painter is a rope at the bow of a boat, used to fasten it to a ship or other object. A stay is a strong rope used to support a mast, and leading from the head of one mast down to some other, or to some part of the vessel.

Chapter 6

Axis smashers

Landing barges, landing craft and Tank Lighters–those names implied three kinds of craft but the truth is, they're one and the same.

Lighter described

The Tank Lighters, designated LCM(3) Landing Craft by the Navy, were 50 feet long and 12 feet wide with a drop-down front ramp. This ramp was raised, making a four-sided ship, when the craft was underway. The ramp had a rubber seal on its inboard side to keep the water out when the ramp was tightly closed. During loading or discharging of troops, tanks, ordnance vehicles or other equipment, the ramp was lowered to form a bridge to or from the barge and the beach. Sometimes there was no beach, just rocks, sand and shallow sea and it served as a "gang plank". A mechanical winch, powered by the engines, activated the ramps. All of the steel ramps were made in the Linnton plant as well as all of the bitt's, galvanized ventilators and much more equipment for the lighters.

There were no accommodations for passengers in the lighters other than the high walled, single deck well. They couldn't see out, and no one could see in except aircraft.

These lighters had a square wheelhouse or pilot house made of steel armor plate. The house resembled a huge piece of square steel pipe standing on end with slots cut in the sides. There was just enough width and height for a man to stand in and steer the craft. If there was enemy fire, the pilot could crouch down, concealing his upper body and head. Through the slots he then could see barely enough to steer the craft if he occasionally looked out over the top edge, and wasn't shot during the act.

The first lighters had a "tent-pole" type compass mounted atop the square pilot house. In October of 1944 these poles were replaced by the "broom-stick" pole which could lower the compass into the pilot house when moving in sheltered waters.

When delivered to their destinations the lighters were stowed aboard liberty ships. Some were sent to domestic locations for training purposes. Those that were sent overseas contained employee-contributed, news magazines and books, stowed in boxes in the LCMs, for the entertainment of "G.I. Joes". The chapter, "Son-Of-A-Gun Goes To War" tells of sending magazines and cigarettes to the servicemen overseas. The *Gunderson Gunner* referred to these lighters as "Axis Smashers", the Axis being Japan and Germany and their allies.

They were used in many battle fronts such as the Aleutians, Tarawa, Normandy and Iwo Jima, to name a few. Gunderson men and women felt deep in pride because their landing vessels played a part in the landing at Iwo Jima in early 1945.

The *Gunner* issue of March 15, 1945, expressed the solidarity and pride of Gunderson workers, "And then three weeks ago, we heard about the Marines landing on a little hunk of black sand and rock out on Japan's doorstep, we heard how they waded ashore from the boats we had built when the chips were down. We heard how they died on Iwo Jima. And then a little, nearsighted guy named Jo Rosenthal, who works for the Associated Press, sent us a picture of what they had done. There were five Marines boosting the flag over the little hill on Iwo Jima." The *Gunner* said, "The chips are still down and everyone is needed every minute of every day of the week to help the armed services finish the job."

Coca-Cola launchings

The lighters were launched and christened with bottles of coke. One picture in the company news showed two sponsors for one ship. One sponsor broke the bottle, but it took three swings before the bottle was broken. Anna Ohler and Katherine Johns were the sponsors. At one launching of three LCM(3)'s, there were signs containing fictitious hull numbers – Number 5,693,486, "This One's For Tojo." Number 5,693,487 was for "Adolph".

These vessels were powered by two, 225 horsepower diesel engine manufactured by the Gray Engine Company of Detroit, a subsidiary of General Motors Corporation at the time. Dozens of square, steel bars were welded crosswise to the surface of the ramps and the steel decks of the LCM's to provide traction for the vehicles and a non slip service for the troops.

When visiting the Naval Operation Center in San Francisco Bay, L. S. "Stan" Baier found out many of the Gunderson lighters were "long gone" to war, while those of other yards were detained for alterations to make them fit for service. Soule Steel Company of Los Angeles was one of the competitors building the same tank lighters as Gunderson.

Production rates

By the end of 1942, 33 of the lighters were delivered.

"As of January 1943 our rate for LCM's is .26 per day." said the *Gunner*. In July of that year the *Gunner* again announced, "Our rate for LCM's is .64 per day." During 1943, 215 of them were sent to war.

On February 3, 1944 the *Gunner* announced, "We are making LCM3's at the rate of 1.48 per day. In 1944, 194 more were shipped before the design was lengthened to 56 feet and the designation changed to LCM(6). 16 of the LCM(6)'s were delivered the same year. The "6's" were built to be sectionalized and shipped overseas for reassembly in a foreign port. The final 40 in 1945.

The lighters were launched on the old marine railway adjacent to the northern property line at Front Avenue. The railway consisted of two rails which declined into the water. The launching cradle had rail wheels underneath it and they rolled on the rails. A power winch at the head of the railway controlled a cable attached to the cradle. This allowed the vessel to be lowered gradually into the water. After a launch the power winch would return the cradle to the top of the ways.

Gunderson's Coca-Cola launchings caused quite a stir throughout the country. Clippings from about twenty papers from New York to San Francisco were sent to the company commenting on the novel idea. Besides, champagne was expensive and scarce. Otherwise, there wasn't much fanfare at the launchings of these tank lighters. At least not what one might expect at the launching of a more majestic ship. "Out of 485 barges made, only three of them had been accorded a launching ceremony–hull numbers #100, 400, and 485. The first one, #100, was christened with a bottle of beer on the same day that Dorothy Baier broke a bottle of champagne over the bow of the 1000th lifeboat," the *Gunner* reported on November 9, 1944. Except for the beer launching, Coca-Cola was used on the other launches instead of the traditional champagne.

Outstanding workers honored with their names on LCM'S

In November, 1943, Gunderson began naming tank lighters after outstanding "victory" workers. The victory workers' names were stenciled on to the bow of the barge. Photos of the honored workers, taken as they posed on the deck of the craft, were published in the company paper.

The first employee, so honored, was Albert Marlowe, a machinist. Marlowe hadn't missed a single minute's working time since his first day in June 1941. Other honorees were Jack Cook, who devised an attachment for fitting skegs to the tank lighter; Isaack "Ike" Matson, for a collapsible test cover and test gage which would save hundreds of man-hours; and C. H. "Cliff" Nasshahn, who devised a tank top spreader of "rare value, one of the most important ideas submitted in the idea campaign," per the *Gunner*. "Hank" Kabus Reiter, who had submitted 36 award-winning ideas was likewise honored. He retired from his job on Gunderson's railcar line 27 years later, in 1970. All told, there were eighty LCM,s named for Gunderson workers, both male and female. There were hundreds of ideas submitted. A good percentage of them improved quality and productivity while earning their authors extra cash and distinction. The names are all listed later in the chapter "Women of Gunderson".

On April 13, 1944, the *Gunner* reported that the pocket magazine, *Coronet,* saluted Gunderson workers in a feature article by Lawrence Galton. "Here's a quick salute," *Coronet* said, "to Gunderson Brothers, Portland, Oregon, producers of Navy tank Lighters, which send the boats rolling toward invasion areas not only with Navy serial numbers but the names of workers who make outstanding attendance records or who offer unusual production ideas."

A column in the *Gunner*, mentioned an idea, "The girls should be eligible for similar honors, except it wouldn't do for just their names to be on the lighter–their phone numbers should be included too." The phone number idea didn't set well with the women. Today, such a statement would be politically incorrect. But the first woman recognized with her name and lighter was Laura Wallin, honored because of her close attention to her work detail. Also among the first women honorees were Katherine Johns and Anna Ohler because of their outstanding attendance and work ethic.

There were some formal programs on the LCM line, as when Mrs. Marian Wilson, a navy stenographer, christened the first LCM(6), one of two barges paid for by the local Navy Supervisor of Shipbuilding's (Supships) war bond program. This unit was named, SPINDRIFT. The name was taken from the spray blown from the wave tops during a gale at sea. They had raised $30,993.50, well enough for two ships. Supships named the second ship for Captain Leland D. Whitgrove in honor of their supervisor. The 3rd through 8th units were named the JAMES L. BRAUN for the Lt. Commander, resident Supervisor at the shipyard, The CHARLIE BROTHERS, the JACK WEBBER, the SAM CLARK, the TOM SIMPSON, and the ETHELIN SHANK, all resident inspectors under Braun.

Gunderson boats displayed

An "Invasion Exposition" was held in Portland in September, 1943 along the seawall between the Burnside and Morrison bridges. The purpose of the show was to stir interest in buying "Invasion Bonds" by exhibiting the various war materials being made in Portland. An LCM Tank Lighter "churned" in the Willamette River and two fully rigged lifeboats were on display. It was difficult to believe the lifeboats with their colorful array of sails and spray shields were destined for such a dreadful purpose as saving lives in a stormy, submarine-infested sea. Funny man Red Skelton was on hand and took a ride in the lighter. There is a photo of young Bobby Gunderson shaking hands with Skelton on the boat.

The original bull wheels

During 1943 and 1944 Gunderson also built 42 hulls (bare steel hulls only) for a 65 foot LCC Landing Craft being built by Albina Engine & Machine Works. They were built in a new device called a "bull wheel". The bull wheels consisted of two wheels which stood upright atop stationery wheels on a frame, on the work floor. The boat or structure was fastened in and through the bull wheels on each end. This permitted the structure to be rotated to permit the welding or other work to be performed, easily, in a downhand manner. The designation, LCC, meant, "Landing Craft Control and Patrol Boat." Not much was known about the craft except its trim and speedy looking hull, its fast engines and its armament. Later, after the war, its use and effectiveness as a patrol and control boat became well known.

In peacetime, prior to World War II, Gunderson had used the "Bull Wheel" to build its first ever commercial boat. The 36-foot, single-screw towing vessel was built for pushing and towing the Maryhill Ferry across the Columbia River. Built for William Switzler, the vessel was named J. B. SWITZLER.

Not only were the "Bull Wheels" used on the LCC's, they were used later on five, navy YTL hulls. Originally turned with a lever, this innovative scheme is still in use today but has evolved into a motor operated device.

Other Gunderson war work

Gunderson has manufactured many thousands of boats, bridge and building beams and railcar frames since its implementation of the bull wheel. Bull wheels had been offered to Gunderson in price ranges of $50,000 to $100,000 but they never purchased one. Plant workers resorted to Gunderson's surplus steel yard and would make a bull wheel with anything that was on hand, saving many thousands of dollars.

In addition to the Landing Craft, Gunderson supplied many hundreds of other equipment items to the armed forces. Among them, during 1943, were 30 paint spray kettles with hoses and nozzles for melting, mixing and spraying plastic, anti-fouling paint, a two component material for ship's bottoms. These were designed by Gunderson engineer, Leighton W. Johnson and representatives of the Navy.

In 1944 they produced dozens of Gravity Davits which were used for holding life boats in place on the decks of ships, and releasing and lowering the boats to the sea when they were needed.

Early in 1944, Gunderson workers also repaired boats and components damaged in war service. These included assault boats damaged in landings on Kiska and Attu in the Aleutian Islands, held by the Japanese. These damaged boats, originally made by other boatyards, were sent to Gunderson for repair. Their motors, which were filled with Aleutian sand, were disassembled, steam cleaned, re-assembled, re-run and tested by Syd Clark, Clayton Heiberg, Jess Foote and Frank Ackerman. Benny Richardson supervised those repairs. Their hulls were repaired as necessary. Darwin Force cleaned grease and muck out of the hulls with live steam, then L. F. Black and Thad Stevens, carpenters, repaired their damage.

War damaged aluminum and plywood pontoons were also shipped to Gunderson for repair. Charles "Charlie" Lynn was one of the carpenters on that project.

511 life rafts were built in 1944 and 1945. These are mentioned later.

Gunderson built 50 deck houses and four pilot houses out of armor plate for Commercial Iron Works, a Portland shipyard.

In the final years of the war, ending in 1945, they manufactured for the army, 400 dual axle, Low Bed, Machinery semi-trailers, 20 ton capacity, with eight - 14.00 by 20

heavy duty lugged tires and hydraulic loading ramps. These were used for hauling army tanks, half-tracks and bulldozers. Originally that order had been for 800 trailers, but 400 were canceled.

They built five, YTL 65 foot, navy tugboats. They were equipped with 375 horsepower engines and six-foot four inch diameter bronze propellers.

They made ten Cargo Lighters, (YF's,)' with galvanized metal cargo holds. These lighters or barges were designed to carry cargo from ship to shore where dock installations were inadequate due to very shallow water conditions.

And, for all of the war duration they continued to produce doors, hatches, manhole covers, scuttles and other ships' outfitting material.

Tank lighter lullaby

A poem, written by an anonymous author, titled, "Tank Lighter Lullaby," appeared in the *Gunner*. It went:

"Roosevelt and Churchill
Met at Teheran;
Stalin asked for weapons–
They called on Gunderson.

"Vasion came to Europe,
barges came, by gum,
Hitler's knees are knockin',
Here comes Gunderson.

"Anon-A-Mess"

Many testimonials were received from members of the armed services as to the utility of Gunderson's products. One, especially brought out the stark, deathly reality of the war.

Machinist Mate, Third Class, Collins K. "Bud" Billings, who visited with Gunderson employees in April 1944, was a twenty year old Coast Guardsman who had been aboard an LST (Landing Ship Tank) when the Marines landed on Tarawa in one of the bloodiest battles in the history of the marines.

Billings volunteered for boats crew duty and became an engineer on an LCM. He said, "Those LCM's of yours are really something. They'll turn on a dime, have plenty of speed and power and that's mighty important when you're dodging (Japanese) eight-inch shells.

"Thirty-three marines stepped out...and the (enemy) mowed them down. I don't think three of those men are alive today to remember that ride. We went back and got another load...thirty-three marines. That was the trip we got hung up on the reef and the (enemy) found our range and gave us everything they had. The marines were there to fight. They stepped out. Most of them were drowned or killed right next to my boat. Then the (Japanese warriors) shot my motor out of the boat. I was ashore the third day. There was nothing but pieces everywhere. Everything was in pieces, the trees, the trucks and jeeps. Smoke and the stink of (Japanese) carcasses and American bodies. It was hell."

The foregoing account appeared in the *Gunner*, April 13, 1944.

Lifesavers

United States supports allies, then enters war

Great Britain and France declared war on Hitler's Germany on September 3, 1939. From that point in time until December 7, 1941, when the United States entered the war, Great Britain and France desperately needed finances and war material to keep from being besieged by Germany.

In 1941 President Franklin D. Roosevelt initiated the Lend-Lease program through which the United States of America sent aid to the Allies. This program continued after the United States declared war on Germany and Japan in 1941. Total aid exceeded $50 billion. It not only bolstered the Allied defenses but enabled the development of the war industries in this country. It solidified public opinion in favor of an all-out sacrifice to win the war.

By the end of 1941, World War II had spread to most of the free world. All of the industrial might of America was marshaled to build defense materiel for our armed forces.

Under Lend-Lease Gunderson Bros.' Linnton plant on St. Helens Road manufactured thousands of ships' doors, crow's nests, hatches, manhole covers, scuttles and other parts for troop transport and merchant marine ships. They supplied the various shipyards through a procurement agency known as Gibbs & Cox. Gibbs was responsible for the preliminary design and buying of these items on behalf of foreign governments, and would instruct how many to build and where to ship them. This effort soon transformed Gunderson from a job shop making trailers and tanks to a production facility with machines suitable for heavy marine construction.

Gunderson's prompt delivery and high quality ensured them opportunities to bid on prime contracts for the U. S. Army, Navy and Maritime Commission.

Gunderson adds to it's name

On May 29, 1942, Gunderson Bros. was incorporated in the state of Oregon. It changed its name to Gunderson Bros. Engineering Corporation, a more apt name, considering the abundance of quality engineers on its staff.

L.S. Baier joins Gunderson

L. S. "Stan" Baier, after working as an independent consultant with Gunderson Bros., formally joined the firm as Production Manager and Chief Engineer when a contract for 50 - LCM Navy Tank Lighters was obtained. Prior to joining Gunderson, Baier designed and patented the first plywood life boat to be approved by the U. S. Coast Guard for use on any ship or any ocean. He licensed Gunderson to build these boats for the U. S. Maritime Commission for use on Liberty and Victory ships.

Baier wrote in his preface of a bound volume of the *Gunderson Gunner*:

"As the training of people to perform the many tasks in constructing steel tank lighters, wood and plywood life boats, life rafts, harbor tugs, covered lighters, landing craft control boats, army trailers plus watertight doors, hatches and miscellaneous steel ship fittings, a training program had to be constantly maintained. With the help of motion pictures taken on the job of various operations new comers could see how the job was done and the pictures served as a refresher for the "old hands" as well. Labor turnover in war time is exceptionally high. The army was continually taking young men after we had just finished training them for some specific job. At year's end we had only fifty (50) people who had been with us a year, out of a work force averaging 700.

"To supplement the training program a column appeared in each issue of the *Gunner* entitled, "Fore & Aft", written by Baier and signed, "The Gaffer". This column pointed out not only the errors but attempted to show how to prevent them and when an outstanding performance resulted, to give a pat on the back. The suggestion box with cash awards, naming tank lighters for employees who had performed an outstanding piece of work, and publishing the news in the house organ, the *Gunner*, all contributed to upgrading production by making people proud of their work and their part in bringing the Navy "E" and Maritime "M" awards to their company.

"I hope anyone reading the accounts set out in these pages will understand the unity of purpose of a small segment of the American people. I am proud of being an American and happy to have had a small part in the war effort of my country."

Baier's column, "Fore and Aft, and his by-line, "The Gaffer", exemplified the life and style of Stan Baier. His knowledge of boats and ships from bow to stern and skeg to mast had evolved through his many years of practice in his craft. In his column he insisted on getting the job done promptly with high quality. He stressed communication, hard work, industry, job safety and secrecy.

Baier enlisted as his engineering department members William Shoemaker, Chief Engineer at the Linnton Plant, engineer Leighton W. Johnson and draftsmen Tim Chapmen, Ed Burke and Richard Councilman. All of these had been involved with the growth of Gunderson's defense work at the Linnton plant beginning with the doors, hatches and scuttles for the Lend-Lease program. Prior to that they had designed various commercial products such as trailers and tanks. In 1943 he added Don Simpson who had been a draftsman at the Army Corps of Engineers. Simpson later became a salesman for the Equipment Division of Gunderson. Leighton Johnson became Chief Engineer when the war ended and Baier and Shoemaker left the company.

New Front Avenue plant occupied

When the new Front Avenue plant was ready to occupy in June, 1942, the Gundersons had already booked it to capacity with orders from the U. S. Navy for the 50-foot landing craft, commonly known as "Tank Lighters". Almost at the same time the U.S. Maritime Commission ordered 200 22-foot lifeboats.

Even before the Front Avenue plant was ready to occupy, the prototype model of the 22 foot lifeboat was being built at Gunderson's Wheel & Rim shop at 225 N. W. Everett Street in Portland. This lifeboat passed the rigid, United States Coast Guard inspection so that when Front Avenue was ready, lifeboat production could start immediately.

Two production departments

At the Front Avenue plant there were two separate production divisions, one for Tank Lighters and the other for Lifeboats. Each department had its own staff, except for engineering and that function was performed by Baier and his technical people.

Front Avenue tank lighter production was supervised by Eugene Quintieri. The Linnton plant production manager was Frank Stump. Adolph Strid, Linnton's former plant head had become ill with cancer and had retired. Tank Lighter and Linnton plant purchasing was handled by E. M. Lundquist.

The lifeboat Division was headed up by Frank A. Bosch, who was in charge of material, production and purchasing. Robert "Bob" Isham was in charge of lifeboat production. Carl Morris shared the superintendency with him. Each of them took a day or night shift according to their needs. Morris became superintendent after Isham resigned and went to work elsewhere. After the war ended, Carl Morris pursued a career as an

artist in painting. His wife became a sculptress. Both have since become renowned in their profession in the Portland area. Carl's works have become quite precious.

Isham and his wife, after the war, operated a small boat shop known as the Isham Boat Works on Hayden Island until his death.

Donald E. Law was Purchasing Agent. Henry Bristol was in charge of inspection. Raleigh Graver was an expediter. Francis De Rize was Bosch's secretary and assistant. Frank Ellison, who was a seasoned seaman and knew a great deal about boats and boat rigging, looked after provisioning of the lifeboats.

Sales were handled by Al Gunderson for the Front Avenue operation with Baier's assistance. Thomas J. Larsen, Plant Manager, handled the sales for the Linnton plant.

The Linnton plant continued to produce its ships' component orders and a limited number of its trailers and tanks. It also it became a major subcontractor of steel components for the Front Avenue plant It produced all of the welded steel ramp gates for the tank lighters, all of the galvanized steel stem and stern irons for the lifeboats and other fabricated parts.

3,100 lifeboats shipped

During the war years of 1942, 1943 and 1944 Gunderson's Lifeboat Division built 1500 22-foot and 1600 24-foot lifeboats for use on U.S. Maritime Commission troop transport and merchant marine vessels. Baier received a royalty on each boat sold.

In January of 1943 the lifeboat line was going so well that Frank Bosch announced that the boats would be coming off the line at 300 per month.

The lifeboats were shipped to the various shipyards in Oregon and California for installation aboard the Liberty and Victory ships being built. The Oregon Shipbuilding Corporation in St. Johns received a large quantity of these boats. At first, the boats were towed on the Willamette River to "Oregon Ship", but later they were shipped by rail and truck.

In the beginning, every third 22 foot boat was equipped with Universal, gasoline marine engines. These boats could carry 16 persons. The non-powered boats with sails and oars were suitable for 21 survivors. The 24 foot boats carried 30 persons, and were powered by a 25 horsepower, gasoline, "Sea Scout", marine engine made by the Gray Engine Company. In the early phase of the contract each ship would carry powered lifeboats which could be used to tow non-powered boats. Toward the end all boats were powered.

The boats were provisioned to sustain their passengers for a prolonged period of time. Included in the provision list for the boats were food and water, flare gun, life jackets, masts, oars and oarlocks, red sail, floating signals and two decks of playing cards. The picture side of the playing cards featured a life boat in full, colorful sail.

Withstand severe tests

The 24 foot boat had an 8 foot beam and a depth of 3'9". Its capacity was 453 cubic feet, nearly half again as much as the 22 foot model. The United States Coast Guard tested it for safety by loading it with 6300 pounds of sand, then suspending it by its bow and stern above the water, and measuring at amidships how the load deflected the shape of the hull. The deflection was insignificant and proved the boat could carry its load of passengers. The acid test came when the boat still floated after being loaded with all its provisions plus the 6300 pound of sand for a total of 8600 pounds. In another test, workers removed all air tanks and opened the sea cocks (the boat's drain valves in the bottom of the boat) allowing water to flow into the boat from below. "Would she sink?"

asked The *Gunner* editor, "Her designer didn't think so and he was exactly right. When the water reached its maximum level, the gunwales (the hardwood rails around the top side of the boat) were still more than 15 inches above the water line. The lifeboat passed its tests with flying colors. It couldn't be broken and it couldn't be sunk. Gunderson designers and craftsmen can be proud of their jobs!" The U.S. Maritime Commission was very pleased.

Many suppliers participated

The air tanks and water tanks were made by Security Sign Company, a Portland commercial sign company whose main line was sidetracked into defense work during the war. The air tanks were installed for buoyancy. The water tanks, with a two ounce dipper, to be kept in the skipper's possession, were installed underneath the seats in each end of the boat. The dipper was the only means by which water could be removed from the water tank. When the tank was not in use it was locked and the skipper had the key. Water was rationed to as little as two ounces per day at sea.

Still another commercial sign company whose identity has been lost, built the provision tanks and first aid lockers for the boats. The fuel tanks were built by a unidentified sheet metal concern.

The lifeboat shell (hull) and frames were of waterproof plywood, reinforced by galvanized, steel stems, sterns and bracketry. As previously stated, the stems and sterns were fabricated at the Linnton Plant from steel, then galvanized for protection against the corrosive action of sea water. The chines (boat backbones) and rub rails of the boat were solid oak. All parts were then fastened together with bolts, screws and waterproof glue.

All of the plywood and lumber for the lifeboat chine battens, braces, bracketry, framing, bilge planks and seating planks was purchased by Gunderson but fabricated by the J.C. Barnard Company, a Portland woodworking concern. The material was all cut to size and shaped, pre-drilled, routed, notched and otherwise worked; some even shaped in a steam press, to obtain the desired contour and utility of fit with its adjacent member. It was painted prior to shipment to the builder.

The owner of the J. C. Bernard Company, J. C. "Jack" Bernard, was a wiry, diminutive, cigar-chomping man who knew woodworking down to the last fiber. He was a nattily dressed man who was always jovial and enthusiastic and whose eyes twinkled when he knew his work was appreciated. There was hardly any question as to when his supplies would be received, he was such a positive person and so good on his word.

The oars and oarlocks were made by the Puritan Oar Company. The sail masts were made by the Portland Spar Company, on Macadam Road. The oars and masts were made out of vertical grain Douglas Fir. Though heavier, fir was much stronger than the normally used Spruce, a wood which had been diverted to aircraft work. These parts were sealed with a clear sealer and inspected for grain flaws to make sure that they were seaworthy. A word picture by the *Gunner* went, "Turning out an average of about 15 masts a day for Gundersons, the plant looks like an Alice in Wonderland toothpick factory."

Provisioned to save lives

The canvas for the lifeboats was supplied by the Ames-Harris-Neville Company, a well known canvas house at the time, who, during normal times, produced textile bags for agricultural and other uses. They tailored, fabricated and dyed the colorful mainsails, jibs, spray hoods, curtains, boat covers and sail bags that were necessary for self-propulsion in the wind and for the protection of the precious cargo the boats would carry. The mainsails

were bright red and the spray hoods were brilliant yellow. When rigged out, the life boat was highly visible in the sea.

Provisioning (on-board supplies) for each person included two cans, each containing seven ounces of "Pemmican", (meat, coconut, raisins, etc.,) seven ounces of chocolate, seven ounces of "Ration C" (a high vitamin biscuit) and a like amount of malted milk tablets. There was also 10 quarts of water for each person aboard the boat. Water was canned to keep fresh for at least a year.

There was a fishing kit supplied with the craft for use only if the emergency food supplies were depleted, "Open only for actual emergency use," warned the label on the kit.

The lifeboats carried with them a set of repair parts and a repair booklet printed on waterproof paper. The book contained detailed instructions on how to repair the boat at sea in event the boat was strafed or otherwise damaged. The manual also told how to make permanent repairs when the vessel reached port. To make sure that the instructions were valid, a shell hole was blown into the plywood hull and repaired. The bullet holes were made by a pistol belonging to one of the plant's security guards. It was determined that an amateur could repair the damage and keep the craft in seaworthy condition.

As mentioned, Frank Ellison was the rigging foreman. He was an expert at his trade. In June, 1943, a fully rigged lifeboat was displayed during a "Ships For Victory" exhibit in the Great Hall of Sculpture, just inside the main entrance to the Portland Art Museum. Robert Tyler Davis, then the Museum Director, asked to have Ellison give his staff a short course in lifeboat lore so that they would able to answer the many questions which would be asked by the viewers. The *Gunner* said that the lifeboat was the hit of the exhibit because of its colorful sails and fair design. Ruby Ellison, perhaps related to Frank Ellison, worked in lifeboat rigging, splicing lines and installing fittings in some 780 feet of rope of various sizes or lengths.

Again, in July, 1943, the boat was displayed at the Broadway Theatre as a backdrop for the showing of Warner Bros.' film, "Action In The North Atlantic," starring Humphrey Bogart as Joe Rocci, First Mate of his liberty ship, "The Sea Witch". In the film his ship was torpedoed and the survivors received tortuous punishment in their lifeboats in the submarine-infested sea.

The ship chandler

All of the fastenings (bolts, nuts, screws, etc.) and marine hardware (eyes, jaws, shackles, thimbles, etc.) were supplied by the Beebe Company, a ship chandlery house in Portland. Their deal with Gunderson was to supply these materials at cost and freight, plus a flat fee of 10%. It was their job to obtain the material ordered by Bosch's people and deliver it when and as needed. This was a unique arrangement when compared with the purchasing style of Gunderson's Tank Lighter operation and at the Linnton Plant. Their methods required competitive bidding and multiple sourcing of nearly all material items because of the wide variety of equipment needed and the huge cost of the components. The Beebe Company had been in business since 1884 when it was Sutton and Beebe Company, getting their supplies from the clipper ships that sailed around the horn. Kenneth Beebe, a tall, stately, articulate and impeccably dressed man was President of the company. He, like Bernard, delivered promptly. Ken was the son of General Charles F. Beebe, who in 1896, acquired the business and dropped the name Sutton from the company title.

The lifeboats were built in the second story loft at the Front Avenue plant. A local 1942 newspaper article outlined the production process:

"In the loft at Gundersons, lifeboats move down the assembly line on wheels, from the beginning to the completed craft. At the first station, the frames are set in position, with identical construction at stem and stern. At the next station, the cradle is made fast with two-seam battens and the boat moves on to have the sides and bilge planks attached. These are made of plywood, the center one molded.

"At station four, the boat begins to take shape, the seams are sealed with oak pieces known as chines, instead of the usual caulking, and grab rails are attached to the bottom–so named because they may be grabbed in the event the boat capsizes.

"At station five, the stem and stern irons are placed in position, the boat is placed upright and the frames on which it has been built until then drops out.

"The first coat of paint is given at station six and the boat rolls on to station seven where the gunwales, nosing and seats are put in. (Gunwale is a piece of timber around the topside of a boat, and having oarlocks for the oars.)

"An interesting phase of the operation takes place at station eight–the rigging department–where old-timers in the seafaring profession hold forth, assisted by women who have already adapted themselves to this type of work. Here the complete mast is assembled, including all canvas equipment, guy lines and ropes, blankets are stowed in waterproof canvas bags, the boat is fitted with life lines and life preservers, gripe hooks, bailers, boat hooks, buckets, oars, row locks, and sea anchors, and the packing is done of first aid equipment, flashlights, compasses, cups, distress signals, signal flags, flare pistols, fire extinguishers, fishing kits, hatchets and repair kits.

"From there the boat goes to station nine where it receives a second coat of paint and some of the tanks are stowed aboard. At the last stop the oars, more tanks and other equipment are put in and the boat is ready to go."

At the end of the loft there was a huge door leading out into "thin air". An overhead trolley with a hoist extended outside the building by more than the length of the boat. The boat was trolleyed out of the building and lowered down onto the bed of a truck for delivery.

A boatswain at a Pacific Coast port told the Gundersons that he favored the plywood lifeboats over the metal ones. He said that he had handled all types of lifeboats and put over 1000 men through lifeboat training. He said that the plywood boat was easier to steer in rough seas because it had a tiller and a rudder, versus steering with a sweep oar in the case of the rudderless metal boat.

Plywood construction saves steel and zinc

Since plywood was used instead of steel for the lifeboats, except for the stems and sterns and some other minor steel parts, Stan Baier claimed enormous savings of scarce steel and galvanizing zinc over the all metal boat. He calculated that the amount of precious steel saved, during the lifeboat program, was almost five million pounds–enough to build 120 Tank Lighters; with enough zinc "found" to coat all the pipe and fittings for 50 liberty ships!

In March of 1943 the 1000th lifeboat was completed. To celebrate the event, Stanley Baier's 17 year old daughter, Dorothy, was its sponsor and launched it by breaking a bottle of champagne over its bow. Meanwhile, over in the Tank Lighter Division after the lifeboat ceremony, they had their own launching of a tank lighter christened by Mrs. Sherdah Bowman smashing a bottle of beer over its bow. Portland's City Commissioner, Fred Peterson, in a talk at the launching, said he hoped that the lifeboat would never be used. (Peterson later became Mayor of Portland.)

In October, 1943, The *Gunner* reported that Seaman Basil Izzi had spent 83 days in a Gunderson lifeboat and had come to visit Gunderson's to compliment the company for the boat's performance.

Post-war lifeboats become pleasure-craft

After the war ended several hundred of Gunderson's lifeboats were sold by the government as war surplus. They were snapped up and used as pleasure boats for fishing. As late as June 1949 Gunderson was receiving inquiries as to cost and availability of the plywood lifeboat.

In the Spring of 1971, Gunderson received a letter from David Arglin of Crestview, Florida, concerning an identification plate which he said he had found on a wrecked vessel while wading on the beach in West Bay, Florida. According to the August *Torch & Stinger*, in its coverage of the story, "The plate is covered with a soft green patina suggesting the romance of wind and sea, sailing ships and buried treasure." The *Torch & Stinger* editor wrote him and thanked him for his thoughtfulness in sending the plate. It's interesting to note the lettering, which was still readable on the plate.

GUNDERSON BROS. ENGINEERING CORPORATION
PORTLAND, OREGON

LENGTH 22.0 FT.	BEAM 7.5 FT.	DEPTH 3.17 FT.
256.7 CU. FT.	16 PERSONS	BUILT 7-14-43
AIR TANK CAPACITY 31 CU. FT.		NUMBER M400

INSPECTED BY CJM M.M. 1
PATENT PENDING

In the September, 1990 issue of *Gunderson News* there is a story about a 47 year old Gunderson lifeboat that was recovered in remarkably good condition by the Clatsop County Historical Society from a farm shed in Brooks, Oregon. It was given a fresh coat of regulation gray paint and the nameplate polished. It will be donated to a local museum (Summer of 1994).

Satin cushion

In March, 1944 Gunderson unveiled a new life raft which was furnished to the U. S. Maritime Commission in quantity.

New life raft tested

The new life raft was tested by dropping it lengthwise from 45 feet in the air to the surface of the Willamette River. The weight of the raft was 2,000 pounds of plywood and metal plus 1,000 pounds of ballast. To quote the *Gunner*, "With a crackling boom like a cannon the hurtling raft drenched spectators with spray 20 feet above the dock. Then like a cork, it bobbed to the surface, as unharmed as if it had fallen into an ocean of feathers." The raft was also given the same fall test on her back. Two days later she passed buoyancy and stability tests after having been slashed open to look for internal stress fractures or cracks. It was only one of a few rafts that weren't demolished in later tests performed by the Coast Guard. Leighton Johnson calculated that the raft had reached a

speed of 55 feet per second when it reached the water's surface and that it had developed a total striking force of more than 50 tons on impact.

Room for twenty

There were no dimensions given in any company publication, but judging from photos, it is estimated that the raft's overall dimensions were 10 feet wide by 16 feet long. The well dimension, where its passengers rode, was about 6 feet wide by 12 feet long. (See Footnote 1)

Buoyancy tests consisted of loading 3,300 pounds of sand into the raft and checking its freeboard. The sand represented the weight of 20 passengers at 165 pounds each. After loading, the freeboard below its deck level inside the well of the raft was 5-3/4 inches, 2-1/4 inches more than was required. Another buoyancy test was conducted with twenty passengers seated in the raft in the water.

Raft survive destructive tests

Not satisfied that the tests were conclusive, the Maritime Commission wanted more tests made. They asked Gunderson to perform the same drop test with the raft being fully provisioned with the equipment and supplies required for the 20 survivors who would occupy it. Three drop tests ensued. The raft and its supplies survived the test.

Then, as if to ask the impossible of it, the raft had to endure more of the same tests before a United States Coast Guard panel to satisfy them of the raft's safety. Again she survived. The Coast Guard tested her along with one of Gunderson's lifeboats at its Curtis Bay, Maryland, proving grounds. Part of their tests on the raft included machine gun strafing.

Porpoise rose sunny side up after ducking

Both top and bottom sides of the raft were the same. This made it impossible for the raft to land in the water wrong side up after launching from a distressed ship. Either side she landed on was "Sunny side up", according to the *Gunner.*

The raft was designed and detailed by Leighton W. Johnson. Baier, in complimenting all who helped design and build the raft said in his column, "The Gaffer", "It looks like a satin cushion." The aluminum sheen did make it look like a huge, satin pillow which could provide 20 persons refuge in an emergency, with ample food, water and signal flares for 30 days, no matter which of its sides was up when it landed.

The raft was built of plywood and aluminum. It was the first time the two materials were combined for lifesaving equipment.

The raft was dubbed, "The Porpoise" because, "it bobbed to the surface after every ducking."

Not as cozy as your living room

Bob Isham, Lifeboat Division Superintendent, and his workmen worked around the clock for several days building the test model.

It was complete with weather protecting canvas, spray curtains, hood, sail and oars. The *Gunner* noted, "Not exactly as cozy as your living room, the 'Porpoise' raft is snug enough for comfort under hot sun, driving rain or in snowstorm."

511 of the rafts were delivered to the Maritime Commission during 1944 and 1945. They were produced at a rate of about 60 per month while in production.

Footnote

(1) There were several photos shown in various *Gunderson Gunner* issues dated March 16, 1922; March 30, 1944; April 27, 1944; May 25, 1944; June 22, 1944; February 15, 1945; April 26, 1945; May 10, 1945 and August 16, 1945.

— The Working Ladies —

Chapter 7

The women of Gunderson

The Gunderson Story is incomplete without a section devoted to the achievement of the women of Gunderson. There are many whose achievements were not praised in this history. For that, my sincere apologies. Without their skills and their significant but unsung contributions, Gunderson would not have become the fine institution that it is today. The women are no less the builders of the company. Its change and growth depended upon them too, certainly in the many systems that measured the pulse and vitality of the business.

Their various jobs

Someone fielded the hundreds of telephone calls that came in to the switchboard from the outside and within. They had to be patient, politely curt and possess a charming voice. Among those in the '70's and '80's were Sue Matney, Jamar Patrick, JoAnne Peterson and Nicki Sittner. Maxine Steigerwald, Switchboard operator in April 1943, was given the title "Queen of the Telephones" by the *Gunderson Gunner*. Another switchboard operator and receptionist in the early 1940's was Elaine Cramer. She later married Chet Gunderson. She supplied a great deal of information about Chet for this history.

In July 1980, Matney and Sittner, received a "baptism of fire" when Pacific Northwest Bell Telephone Co. installed a new telephone system, "Dimension 400" in MRED's offices. This system replaced the traditional switchboard room in which the two women were isolated. It liberated them from their "dungeon" on the second floor behind the engineering department, and they were no longer just operators but became receptionists for the 4350 building as well. Their patience must have been stretched to the limit during the first few months of the new system, because they had to train all MRED employees how to use it and their "new- fangled" phones. To do so the user had to be somewhat computer friendly. Not everyone caught on right away.

So if one's name is missing from the list of women written about herein, you're no less vital to the success of the company you helped to build. It simply could not have been done without YOU.

"Miss" Malinen

The first woman I met at Gunderson was Aino "Ina" Malinen. We called her "Miss Malinen". She was Office Manager to Chet and Al Gunderson in the 1930's and 1940's. Her office was at the uptown headquarters at Northwest 14th and Everett. She threw "the fear of God" into me when I first came to work at Gunderson's Linnton plant. She was a very busy woman and wasn't much inclined to pleasantries. Much of the work which I did went across her desk – the Linnton plant time keeping, costing of jobs and personnel records –it had to be exact. She held the office together and somehow managed to please both Al and Chet at the same time. After we came to know each other better, I liked her and we got along very well. When I first got the idea to write the Gunderson history, I knew Miss Malinen would have a wealth of information for me. I had been out of touch with her for years, but when I located her in 1985, living with her sister in Astoria, Oregon, it was too late, she had had a stroke and her memory was gone.

Someone took shorthand letters and memos from managers who spoke vaguely, in gibberish and in a breath. Yet, when the messages were neatly typed out on a well proportioned page, there was no doubt left as to the manager's message.

Among the first women who came to mind were those who aided me and worked with me, the clerks, secretaries and stenographers.

Anyone that worked with me, I've decided, was deserving of a medal. When I joined Gunderson, I was fairly green at most things, especially managing people. It was a trial and error thing. I'm sure, looking back upon it, sometimes I must have seemed very ignorant indeed.

The secretaries

Anyway, in the 1940's, thanks to Helen McMeekin, Jane Brooks and others beyond memory. In the 1950's through retirement in 1984 there were Anita Baird, Jean Carlson, Dawn Coakley, Pat Juggert and Pat Younts. There may be one or two left out. They were all fine secretaries and each one wins the gold for her time span.

I must admit, though, that my first three secretaries at the Linnton plant were male. They were Jack Wyman, Eugene Hillstrom and Jimmy Ince. Jimmy didn't stay long, though. He joined the armed forces, so Eugene Hillstrom replaced him until I moved to Front Avenue. I was my own secretary for the first few months of my career at Gunderson. That was when my "A" in typing paid off. As the Linnton plant got busier, a secretary was needed.

There were no female workers at Linnton except for Janie Carr, who did Janitorial work. She had a son in the army and said her job at Linnton "is the best way to help him."

Anita "Tex" Baird

Anita "Tex" Baird, originally hired while she was still Anita Byers, began her career at Gunderson on September 12, 1958 as a secretary, typist and file clerk. From Hasting, Minnesota, by way of "Big D", Dallas, Texas, she was a delight to be around. She was like everything else in Texas, nothing finer, a cheerful, loving and thoughtful person.

During her 25 years with the company and after she had been a secretary for a few years, she was promoted through the ranks of the purchasing department to become a buyer. She bought office supplies, printing and maintenance parts. It was a job which involved hundreds of line items each week, and consequently she issued many more purchase orders than the average buyer. It required quite a diversity of knowledge to cover her buying spectrum. It's amazing how she kept track of it all.

She also expedited order deliveries, which means that part of her job was to contact our suppliers and make sure that they made their deliveries on time. She was a forceful woman. She wouldn't accept the word "later" rather than "now" as the answer to her demands.

Even though she was no longer my secretary, she remained my adviser, confidant, critic and informant. She passed along all of the gossip and scandal floating around the company. I did not question the sources of her pipe line – I was reluctant to, I didn't want my news to be cut off.

She was an excellent secretary. In November 1971, she was chosen by Purchasing Management Association of Oregon to teach in a seminar for secretaries. Anita made a presentation titled, "The Art of Letter Writing." Her subject matter was very useful to all of the secretaries and it still remains valid today.

Anita had the most unique filing system. She didn't file things right away. If they weren't on her desk top in stacks and stacks, they were tucked underneath her desk pad,

or underneath the cover of her typewriter, sort of a pending file. Maybe this was due to my short memory – I was having her look up things for me too soon after they happened. After a while, when she was not around to locate them herself, things were easy to find. Just look under the typewriter cover.

Once when she went on vacation, I asked her to be sure and file everything on her desk so it could be found while she was away. When she left, the top of her desk was as clean as a whistle. So to reward her, I placed a small vase on her desk and put a fresh rose in it for her return. Where had she filed? In her desk drawer and underneath the cover of her typewriter.

On March 1, 1974, it was fun getting Anita ready to move her office from the 4700 building to the 4350 building. That was when the whole purchasing department was moved up there. The biggest load came from the top of her desk and her desk drawer. There is a photo of that.

A lot of people thought Anita was abrasive. I received more than one phone call from a person in another department complaining about Anita's caustic manner. Two or three cried. I told them to shrug it off and give it right back to her, that if I could get use to it, they could too. She was a kitten underneath that tough sheen. To use one of her favorite expressions, "She was a caution to the Jay Birds." She was nicknamed "Tex" and the "Dimpled tornado." Anita retired in October 1983 and passed away December, 1993.

Sam Jackson, Senior Purchasing Agent at the time of Anita's retirement, composed the following tribute to Anita which he recited during her retirement party:

Ode to Anita G. Baird

Anita, Anita how long have I known thee?
Since our name was Gunderson
Even though we are now FMC.

When I first met you it was fall:
But since that time I've seen
You go through it all.

Needless to say, there have been
Good times and bad times.
Sad times and glad times.
Were there even a few mad times?

Whether the need was small or large,
Anita would always take charge.
From her vantage point,
She had a finger on the pulse of the joint.

She is one lady we will surely miss
For she was full of news,
And if you came to her, she
Would certainly tell you her views.

So, after twenty-five years of do it all,
Know it all and tell it all;
Our beloved Anita will no longer
Be at our beck and call.

When my regular secretary went on vacation or was off sick, I relied on Pat Younts, a secretary to other buyers in the department. Pat was brilliant. Not only was she a fine secretary but the statistical work which she regularly did for me required considerable mathematics. She performed it with accuracy and understanding. The charts and graphs she made were beautiful. I often told her, if she wanted to make a career at MRED, she could become a fine manager, but she had to take time off to raise her son when her husband passed away.

Pat Juggert succeeded Anita Baird when Anita became a buyer. Previously she was a secretary to Ms. Muriel Spear, Personnel Manager, where she kept records and processed new hires for salaried employees. She had little trouble in making the transition. She was a fine secretary and she, too, was later promoted to a buying position.

Other executive secretaries

As to others outside of my department, a valuable employee was Connie Pilker, the executive secretary to Al Gunderson, Chet Gunderson, Bruce Ward, the sales managers and other executives later on. Many at the same time.

Connie joined Gunderson May, 1959. She was born in Chicago, Illinois and raised in Cicero, IL, the home of Al Capone. She had lived in San Jose, California, where she attended San Jose State College. She lived in Los Angeles before her move to Portland in 1951.

Connie was among those who listened to the wrath of the two Gunderson brothers when they were feuding but she stuck to it through all the turmoil, when others with less tolerance, would have tossed in the towel.

In addition to her dictation from several executives at the same time, Connie typed up all the jobs sheets and the railcar job specialty lists. She still had time to shield her bosses from all unnecessary details. I marveled at the "mountain of work" that passed through her office. When one wanted to know what was going on, or wanted to research a file, Connie could put her hands on it in minutes. Her filing system was flawless.

Sada "Sid" Tarshis, Secretary, early on, to Charles Hawkins, Vice President Finance, and later to other executives, was another gem.

One of Sid's extra jobs was to arrange for transportation and hotels for those who traveled. When you traveled according to Sid's itineraries and her instructions, you were never sidetracked. Her arrangements were "first class". I remember my many trips that she efficiently and accurately arranged. She supplied the cash advances and processed the expense accounts. She wouldn't put them through for payment until they were accurate to the penny. And many of mine were not too accurate.

She was skilled in the art of calligraphy. When party invitations were sent out, and name place tags were needed, she did them in calligraphy. They were beautifully done.

If one was mired in a problem involving composition, literature or writing, she was the one to go to for a solution. If she was in doubt, she had a friend at the public library who knew, or could find out. On one occasion, I had heard a passage from one of Shakespeare's plays, and I wanted to use it in a speech on negotiation. Not knowing where the passage originated, I put the question to Sid, and within a short time she gave me the name of the play, chapter, page, verse and line number precisely.

She was a lovely, intelligent and articulate person. I'm grateful to be a friend of hers. She retired September 1, 1983 after 14 years with the company.

After she retired and before the onset of her present illness, I had hoped she would work with me on this history, correcting my composition, grammar and spelling. She did for awhile but her devastating illness has prevented our getting together.

Connie, Sid, Anita and Evalyn Smith were among the first women "liberated". "Women's Lib Has Come To Gunderson" was the caption to an article in the June, 1971 *Torch & Stinger*. They had just been named associate editors for the publication. They served for several months, Pilker the longest, until March, 1974.

Getting the paychecks out

Marilyn Fitting, currently Senior Payroll Clerk, began with Gunderson as a cost clerk in May 23, 1960. By January 1, 1969 she became the Payroll Supervisor and has been in that capacity ever since. Since the latter days of the depression in 1939, no one at Gunderson has failed to get his or her paycheck on time.

Marilyn came from South Dakota but at an early age moved to St. Helens, Oregon where she went to school. Her hobby was camping, working in her yard, and basketball games. By now she's sure to have mastered the art of sewing which she talked about in September, 1971.

In December 1970, Marilyn and Arletta West were pleased to receive the new data processing equipment that took them out of the "horse and buggy" days into the modern world of the computer.

Their new 2780 terminal was linked directly with FMC's San Jose IBM 390-50 computer. They could key-punch payroll data onto data cards, place it in their reader terminal which would send the data to San Jose. After the big computer processed and calculated the data, which only took minutes, it activated Portland's terminal and gave it the finished information, From this information pay checks, earnings records, tax withholding records, etc., were printed automatically. "Before that time, NCR bookkeeping machines were used and much work was done by hand," Marilyn said.

Concurrently with the tapping of FMC's big computer, the company acquired a time sharing system from General Electric Company that "takes the power of a large, sophisticated computer and gives it simultaneously to many remote users, and in a conversational manner." 300 programs, including Architectural Engineering, Cash Flow Analysis, Depreciation Calculation and Graph Plotting were instantly available to Gunderson. A Gunderson teletype terminal similar to an electric typewriter sent to and received from General Electric. The operator of this system was Rosalie Carman.

The nurses

Evalyn Smith became the plant nurse in 1966. She was shown on the cover of August, 1979 *Torch & Stinger* treating Marshall Mills, side building rigger, for a cut elbow. This issue introduced the new medical center at MRED. Evalyn provided "first aid for injuries of every severity, gave flu shots, administered eye drops and comforted those in serious pain while they awaited an ambulance to a hospital."

When Evalyn retired February 25, 1982 her going-away party was held in the Safety Building. The *Torch & Stinger* carried the event and is quoted:

"During a short presentation, Plant Physician, Stan Welborn, M. D., said, 'She's dispensed lots of advice, heard lots of problems, and had lots of tears shed on her shoulders.' Division Manager John E. Carroll, Jr. added, 'I'd like to express my thanks to Evalyn for everything she has done for the company.' He continued, 'There have been good times, bad times, and all kinds of times, and she's stuck with it through all.'

"She's gone into some hazardous places around the plant to help people, and we all respect and appreciate it. We'll miss her a great deal,' said Marine Material Handling Superintendent Ed Yeager."

When Evalyn was hired "Her office was a small building near the 4700 gate. Since that time she has seen the FMC medical department expand into the most complete on-site industrial medical facility in Oregon."

"Prior to working for FMC, Evalyn worked as the plant nurse at American Can Company, and school nurse for Portland State College and the University of Oregon Medical School. She was also instrumental in forming the first industrial nurse's association in Portland.

"Although she has no definite plans during retirement, Evalyn said she does have some nice trips planned including one to Reno the middle of March. Industrial Relations Manager Marvin Henderson joked, 'Evalyn's told me for years that during her vacations she has to visit a sick friend in Reno.' He added, 'Now she has lots of time to visit all her friends.'"

Evalyn was replaced as Supervisor of Nurses at FMC by Nedell Lanros R.N. Nedell was a practicing emergency nurse and a nursing coordinator for emergency and primary care nursing services at several area medical facilities. The *Torch & Stinger* said, "Nedell also is experienced as an instructor of paramedic services, emergency nursing procedures, advanced trauma life support, and other medical service systems. While developing emergency medical programs, she authored and had published a major textbook on emergency nursing procedures which is now in its second edition."

"I'd like to help continue the quality of care here,' said Nedell. 'FMC has provided a marvelous medical facility, and I'm happy to be working with a physician of Dr. Welborn's stature.' She added, 'I'd like to be considered a resource, and employees are welcome to come to me with questions or problems.'"

The opening of FMC's new medical facility was not the first such event. The very first issue of the *Gunderson Gunner*, January 18, 1943 carried an announcement of a new dispensary at Gunderson's main plant at 4700 N. W. Front Avenue. It said:

"Fully equipped and in operation this week at Gunderson's main plant was a new dispensary – termed by the State Industrial Accident Commission the most modern of its kind in this area. With the installation of a few more heaters and application of finishing touches to the reception room, the dispensary will be complete.

"On duty on the day shift is Mrs. Marjorie Alberts, graduate nurse. On the swing shift are two graduate First Aid men (yes, men) – Lloyd Townsend of the Lighter Division and Henry Heckley of the Lifeboat Division. Nor is that all: almost all guards (security) are graduate First Aid men, ready to cope with emergencies.

"Mrs. Alberts reported that in the brief time she has worked in the dispensary colds have provided the reason for most calls. Also fairly common were abrasions of different types, most of them of a minor nature.

"But minor or serious, Mrs. Alberts stressed that injuries should be taken care of at once. 'No matter how small an injury may be,' said she, 'an employee should come to the dispensary at once to have it treated. Don't take a chance on anything – have it taken care of right away and you'll never regret it."

A photo of her in the *Gunner* showed her treating Seaman "Red" Holton, U. S. Coast Guard lifeboat inspector, who pretended to be a patient, while she demonstrated eye injury treatment at the dispensary.

The princesses

The company had its lovely princesses too. In April 1975, Janet Parker, a secretary in the Contract Administration Department, was runner-up in the Portland Maritime Queen Contest. During her reign the Princess participated in several marine related events such

as National Maritime Day, National Transportation Week, and the Rose Festival and Parade, and the arrival of ships on maiden voyages. The Queen and Princesses were the official representatives of the Port of Portland at these activities and were sponsored by Portland's Propeller Club and the Women's Shipping Club. Other aspiring FMC beauties that year were FMC runner-up Tanya McMillin, Accounts Payable; Cleo Clark, Receptionist; Valerie Cottingham, Office Services Secretary; Cheryl Hoisington, Cost Accounting; Kathy Lord, Accounts Payable; JoAnn Peterson, Telephone Switchboard; and Annette Taggart, Receptionist.

In April 1976, JoAnn Peterson became FMC's representative in the Maritime Queen Contest. In the final voting she was selected as runner-up in the city-wide competition. FMC's Runner-Up was Valerie Cottingham. Other FMC contestants were, Jeannette Baker, Marine Laborer; Cathy Duree, Marine Engineering; and Carol Shenk, Blueprint Room in Marine Engineering.

In April 1978, previous runner-up Valerie (Cottingham) Rader was selected as FMC's entry in the Maritime Court. In the finals, she was chosen as a Princess on the Court. Her runner-up was Bernadine Raiford, Welder on the railcar line. Other contestants were, Wendy Gustafson, Personnel; Doreen Schier, Outfitting Secretary at Swan Island; Holly Smith, Blueprint Room Aide and Penny White, Quality Control.

The FMC judges must have had a tough time selecting their candidate. All of the contestants were beautiful to behold.

Women in war effort

Women not only worked in the offices at Gunderson. Since 1942 they've worked in the production plant. It will be seen that many worked in the war effort. Many had husbands, sweethearts, sons and daughters serving in the armed forces. Some were divorced and working to support their children. Others worked alongside their husbands in the war effort like Calvin and Estelle Pearson.

Gunderson News, September, 1990, featured on its back cover a photo of Calvin ("Boots") and Estelle Pearson posing on a LCM (tank lighter) which was named in Cal's honor. Cal's signal honor, for his fine shop committee work, was covered in the *Gunderson Gunner* May 25, 1944. Later, on March 15, 1945, the *Gunner* featured Estelle posing on her own tank lighter named for her honoring her excellent work. Cal was a foreman, and Estelle was a lead welder. *Gunderson News* reported that the couple's grandson, Mitchell Hughes "now works in Gunderson's steel yard.,

The following article covering three such workers is directly quoted from the *Torch & Stinger*, July, 1978 issue:

Evyonne Birde:

"The playboy bunny symbol painted on the weigh house door is not at all representative of the weigh master who runs it.

"Evyonne Birde is divorced and has been a single supporting parent of three children for the past nine years. In 1976 – laid off and between jobs – a friend at the WIN (Work Incentive) program, recommended welding school. 'I was shocked. I thought it was crazy – the last thing I would have thought of!' smiles Evyonne. 'But I thought, what have I got to lose?' Evyonne went through the welding program, going to school eight hours a day for three months. 'The kids couldn't believe it – I'd leave for school in boots and old clothes. After school was over, I was afraid. I saw guys at the school quitting and giving up. It started to get to me. I didn't think I could do it. So, I went to Franz Bakery and did janitorial work – that took courage, too.'

"Then in February of 1978 – two years after she'd been to welding school – she came to FMC and took the welding test. 'When Scott Eave (employment officer) told me I passed, I couldn't believe it, not having practiced in so long.' Still full of apprehension, she came to work on February 11 as a welder. Since she started working at FMC, she and her children – Anthony Gray, 16; LaJourdain, Jr., 12; and Tanja Marie, 11 – are 'really happy.' Evyonne now runs the scales on the railcar line and is 'happy with FMC – my job and the people. I sometimes think that I'll wake up in the morning and find that everything is a dream.'

"A Jehovah's witness, Evyonne has a lot of confidence in her beliefs, and feels her faith has helped her to get where she is today. She feels that many women in her position who must support their children allow themselves to 'wallow in self pity.' She feels they often carry a grudge against the husband, allowing the children to pick up these bad feelings toward their father. 'I don't take them down that road. I have nothing against him. We were married young and when it came to the test it just didn't work.' She and her children get up at 5:30 every morning, have breakfast together, then have a 'little spiritual session. I try to teach them that people aren't perfect. They can't always measure up to your expectations.' Tony, Tanja and J. J. are bused to the Lake Oswego school district, and the students at Oswego 'accept them fantastically. The children have social and academic pressures in school. I use the Bible to help guide them to understand their feelings and others.'

"Evyonne is cool and level headed; her faith and positive thinking infectious. Happy that she suppressed her fears and wandered out into a 'man's working world', she claims, 'it took a while for the guys to learn where I was coming from, but once they saw I was serious (about work), they have treated me with nothing but respect.'"

Karen Michell:

"Karen Michell had been a cocktail waitress and bartender for twelve years before coming to FMC in 1974 as a brush painter on Swan Island. The second woman painter FMC had hired since World War II, and the second woman to join the painters union, Karen explains, 'When we (women) first started, the guys really didn't know what to do with us. They pampered us at first – they'd mix our paint for us. It took about a month till they realized we were serious about wanting a job.' Petite, slim and delicate featured, Karen says, 'I think we can do everything the men can, except for lifting heavy things – anything else we can do.' Apparently, Karen was right, as she was made 'Leadlady' at Swan Island for a year and a half before coming to the railcar line last November as a stencil painter.

"Karen says she is not a woman's libber. She did not take the job at FMC to prove a point. 'I'm there because I had to work; the job pays enough money so that my children can live as well as the next person. I couldn't do that working in the bar business. I could easily have been a welfare brat, but I like to work and have worked all my life.' Karen is mother of two – John, 19 and Melynda, 10. She has been their single support for the past nine years, till she was remarried in November. 'I've been working and supporting my kids almost all of my life,' Karen Says.

"Karen's own parents were divorced. She and her mother lived in an apartment in Spokane on $65 a month, without electricity. At 16, Karen quit school and went to work. 'My lifelong dream was to have my own home.' She now has a mini-farm in Battleground, Washington, two and a half acres, with horses.

"Being a single working parent was not easy. 'After eight hours of work you're tired, you'd like to sit down. The minute you get home you have to fix dinner. It's 8:30 or 9:00

before you're done with just the necessities. It's especially hard when I had to work weekends. The kids get cheated. When they need you, they need you now.' Karen feels that when the kids are older, they will respect what she has done. Perhaps, they already do – Karen's oldest, John, is now a painter's apprentice."

Virla Busse:

"'I just push till I drop,' Virla laughs. A welder on the railcar line, Virla Busse is a mother of 6 and grandmother of 15. Virla has worked all her life to help raise her six children and claims, 'I'll work as long as I feel good. I was raised that way.'

"Originally from Nebraska, Virla was the oldest of 10 children. At 19 she was married and had her first child. In 1942 she and her husband moved to Portland, and with the start of World War II, Virla began her first job as a welder at Albina Engine and Machine Works. Training the first two weeks on the job, Virla helped weld together four or five different ships in 2-1/2 years. During the war there were an equal number of men and women working at the Albina yard. Most of the women worked as welders. Virla describes the working atmosphere as 'relaxed and friendly.'

"After the war Virla went to work as a meat wrapper, and she and her family moved from Portland to Vanport. In 1948, the Vanport flood struck, and the Busse family lost nearly everything. The water claimed all but 'some silverware and a ruby I'd stuck in the toe of a shoe and put up in a closet so the kids wouldn't get it.' With no insurance to pay for the damages, the Busses moved to Vancouver to start over again.

"Virla was a meat wrapper for over 17 years when she knew she could 'tie up her pension.' Her husband, who had been employed with the railroad and the Merchant Shippers Association, had to retire due to medical disability. So Virla went 'Where the money was. I hadn't had a rod in my hand for thirty years,' Virla marvels, but she passed the welding test and in April 1973 became one of the first women welders on FMC's railcar line.

"There were changes as she returned to her welding career after a thirty year hiatus. There were new welding machines; Virla had always used a rod. As the only woman on the line, Virla claims, 'we had our 'chauvinistic pigs'; there were a few who didn't like it. But I think maybe it was because their wives weren't making that kind of money.' She now feels the men are used to women in the plant.

"A bundle of energy, Virla has not only worked all her life, she has worked most of it on Swing shift. This way she and her husband could save baby-sitting costs. She would come home from work, get some sleep, get up and get the kids off to school, then go back to sleep for a while. She would then have time to do some housework and cook dinner before going back to work.

"Virla likes her job – enjoys welding. 'It's sometimes hot and dirty, and the welding leads heavy, but I like the work.' She likes FMC. She also likes Portland because, she smiles, 'I love the rain.'

"Though Evyonne, Karen and Virla have diverse backgrounds, they all have something in common. In an effort to support their families, each has ventured out into an industry traditionally dominated by males, taken a non-traditional job, and each has succeeded."

Virla Busse retired March 30, 1984 after ten years with FMC and passed away October, 1993.

Tracking the numbers

Someone was behind all the workers, totaling up the hours for the paychecks. Others like Bridget Davis and Lexie Colton, in 1980, were immersed in personnel record-keeping and benefits. Davis kept the employee records for seniority, sick leave, service awards, transfers and promotions. She processed layoffs, quits, shop pay for jury duty and issued union delinquency notices for the Teamsters. Colton saw to it that employees understood their medical coverage, especially the older employees. She processed a multitude of claims for health coverage.

Someone verified the bills and paid them on time, maintaining the company's credit rating. For years Linda K. Guy, in accounts payable, supervised the payment of thousands of invoices. She must have had the patience of Job to keep her "cool". There was a constant stream of purchase orders that, to a buyer, were quite clear, but to a non-buyer still lacked information. A similar problem arose with the invoices from suppliers. To match the invoices with the orders was a tedious process, but she did so pleasantly and patiently. She is now, at this time, General Ledger Accountant, the manager of the Accounts Payable section.

Someone kept track of the jobs, and raised the warning flag when budget limits were reached. They made sure that when a job was completed it was closed out, cost and billed to the customer correctly and promptly. Lois M. Emery, a long time employee, saw to that function and, as of this writing, manages the Contract & Billing section of the Finance Department of Gunderson Inc. Lois has been of infinite help in this history by supplying lists of railcars built from the beginning of Gunderson's entry into the railcar business to the present.

A good job well done

Nearly every issue of the *Gunderson Gunner* featured photos with accompanying stories of women workers. To give the reader some idea of what these women did, some of these stories are listed. Though the photos are not shown, most are self-explanatory.

The *Gunner*, February 11, 1943:

"Esther Mead, helper in the lifeboat Division, applies waterproof glue." (To a joint in the lifeboat plywood.)

The *Gunner*, February 25, 1943:

"As many as 52 lifeboat masts a day are rigged by these two girls Betty Corder and Ilene Rutledge. (The terms "girls" and "gals" were in common usage in the 1940's.) Masts, like other important lifeboat parts, are made in sub-contract plants." The two were pictured in the the *Gunner* with dozens of masts rigged by them.

The *Gunner*, April 3, 1943:

Photo shows Jean Isham of Lifeboat division using a copper tubing flanging device which saved lots of time in fitting boat tubing. Jean was the wife of Bob Isham, Superintendent of the Lifeboat Division. Each end of the copper tubes in the boats, such as fuel lines had to be flanged or flared to accept the connection fittings.

"Maxine Steigerwald, queen of the telephones at Front Avenue, has been having trouble seeing the little lights on her switchboard lately. Informed sources say it's on account of the stardust in her eyes since she's announced her engagement to Lieutenant Richard E. Shannon, U.S. Army Air Force. Mebbe so!" She was the switchboard operator and receptionist at the Front Avenue plant.

"It takes a lot of paper work, too, to build lifeboats and tank lighters. Here, (photo) Maryjo Henderson sends a telegram by teletype while Mary Donnelly does bookkeeping."

"Office employees shown here at lunch are, Muriel Spear, Maybelle Hatfield, Margaret Dement, Edrie Earle and Muriel Lowe." Muriel Spear stuck it out with Gunderson and retired 41 years later in 1984!

"Blowing soap bubbles is work to Lee Burroughs (and) Mildred Peters, shown testing air tank welds." They were testing tank lighter air tanks for leaks.

"First lady welder at Front Avenue plant is pretty Virginia Kilgore. 'I love it!' says she," in the story accompanying her photo.

The *Gunner*, May 6, 1943:

"Two lifeboat cuties, Della Jenkins and Erma Ladd sharpen knives to trim canvas on hulls."

"Testing lifeboat in new tank is Splicer Ruby Ellison, shown here operating hoist that lowers boat." Photo shows lifeboat being lowered into a tank of water to test for leaks.

The *Gunner*, May 20, 1943:

18 members of "Ray Dahlgren's Swing Shift Hot Shots won't take a back seat for anybody! A few weeks ago they smashed the welding speed record. This week the enlarged crew signed up 100% to donate a pint of their lifeblood each to save a soldier's life." Shown in the front row of the group photo was Bessie Biesly, Reva Fry, Margaret Riedinger, Lillian Smith, Ila Gourde, M. Shockley, Virginia Dahl, Marie Wegner, Olive Pollack and Mabel Peterson. In the last row were the male members of the "Hot Shots", E. F. Fry, Walter Brock, Bernard Lewis, E. Kannagaard, Hal Fobes, E. Noyes, Ray Dahlgren and Ed Dallimore. Olive Pollack appeared elsewhere in the same issue as a $5 idea winner. Her idea was not identified.

Virginia Kilgore (GB's first woman welder) was praised for selling 75 cigarette tickets "in the recent drive to send smokes over seas." Each ticket represented a carton of cigarettes for shipment to service men overseas.

The *Gunner*, June 3, 1943:

Olive Pollack wins $20 for submitting four more winning ideas.

The *Gunner*, June 17, 1943:

"Olive Pollack, pride of the swing shift, collected $20 two weeks ago for turning in four prize winning ideas in a single week. This week she's keeping up the good work by cashing in on three more good ones." In the accompanying picture, Swing Shifters and also prize winners, Charles Piersee and Harry Peterson hoisted her to their shoulders while W. H. Lawrence offered congratulations.

"To help Gunderson workers do their job more easily, new work platforms have been installed on the production line. Zoe Johnstone was pictured demonstrating a device to permit moving lifeboat.

The *Gunner*, July 1, 1943:

"Olive Pollack, Gunderson's Hot Shot welder on the swing shift, has won so many five dollar bills in the idea contest that this week she turned her winnings over to the Red Cross."

I couldn't find an example of Pollack's ideas. There were so many ideas submitted by the employees that only a few exceptional ones could be published. To describe each one and who originated them would have taken a magazine much longer than the *Gunner* and this would have created a problem of inequality if everyone's name was not mentioned. I would guess that Olive's ideas were mostly for improving the devices for holding the parts to be welded, keeping the equipment clean or tips on how to improve and speed up the welding. Obviously, she was a very observant and creative person.

Every idea, winner or loser, was itemized very briefly in each issue of the *Gunner*, but only by serial number. The originator's name was withheld. Typical ideas were reported in the following manner:

"2419: Stiffeners for catwalks let you walk out with five bucks."

"2471: Combination tool for scalers worth 5 dollars."

One idea didn't go over very well with the awards committee:

"2831: Mister, you can suggest what clothes women ought to wear to work, but better not try to tell them."

The women of Gunderson were very creative. They submitted scores of good ideas, winning $5 each. No attempt will be made to list them all, there were so many. Suffice it to say, the war effort was hastened because of their innovations.

The *Gunner*, July 15, 1943:

To give "some idea of the supplies needed in building tank lighters, Marie Strother and her two associates, W. H. Stack, and Lillian Frei are shown in a photo of Gunderson's storeroom showing rows of hundreds of parts for the landing barges.

Quips from the *Gunner*:

"Seems, Esther Pilkington, leadwoman on the Tank Lighter division's swing shift, is just too darned bashful. Having cashed in on a winning idea this week, the bashful gal just plain refused to have her picture taken. Come, come, Esther! Is that any way to lead?"

"Little old Dan Cupid sure is busy around the plant these days! Now it's Howard Lorentson and Myrtle Smith who have announced their engagement, while Jean Rainsford, of personnel, says she'll center-aisle it soon with Ensign Leo Chaffin. Wish we were in the jewelry business!"

The *Gunner*, August 12, 1943:

"Instructor Leonard Gott talks things over with Student Myrtle Welch as Gunderson's new welding school gets under way. Says Leonard: 'The girls are doing swell; we'll make first class welders out of them mighty soon." This was a photo of three students in their welding booths.

Virginia Booth was shown in a photo with ten of her male associates who were the biggest group to receive idea prizes in one week. They were Pete Brajcich, foreman, Henry H. Kabusreiter, L. T. Richey, H. O. Peterson, Martin L. Dahl, Glenn Kiefer, Hayden Percell, Chuck Colier, Joe Sprague, and E. L. Kannegaard.

From "On The Lighter Side" column:

"Howya gonna get the gals back to the stove and the dishpan when the war's over, after teaching them to be welders at $1.20 an hour? Our post war program: a welding shop in every kitchen."

The *Gunner*, August 26, 1943:

"Six More Good Reasons For Working at Gundersons," was the caption accompanying a photo of six lady workers peering over the gunwale of a lifeboat into the camera. The *Gunner* cameraman found that the lifeboat division "has many attractive features not listed in the usual why-I-like-to-work-at-Gundersons list." The women were, Donna Garrett, Melinda Sprecher, Maxine Jenkins, Bernice Jones, Velma Partlow and Della Jenkins.

From "On The Lighter Side":

"No babies reported this week. Come on, girls, how do you expect us to go on winning production awards?"

The *Gunner*, September 9, 1943: Working Labor Day

Among several workers In favor of working Labor Day was Janie Carr, whose son was in the army overseas, she said her work at the Linnton plant "is the best way to help him." She was a janitor. (It is noted here that despite the comments in the *Gunner* that there were no women production workers permitted at the Linnton Plant, she worked there doing janitorial work.)

As far as is known, she was the only female to work there. According to a list of non-production employees at Linnton dated in 1944, there were two women listed on the payroll. One was Mrs. C. E. Gunderson, (Hazel, Chet's first wife) and the other was Mrs. C. A. Nelson. Both were listed as "Executive" It is not known what they did. I do not recall ever seeing these two women working at Linnton. They may have worked on Linnton paperwork but did so at the uptown office at 225 N. W. Fourteenth Avenue.

Enid Bird, of Personnel. She said, "I don't imagine that the boys in the South Pacific get the day off either, now."

Lenora Larsen, "I'm really doing the job I like and that helps us to win."

Melinda Sprecker, "Labor Day is just as good as any other work day!"

"Welder Elizabeth Stott climbs aboard a tank lighter for work on Labor Day. 'It's all right,' she told the reporter."

The *Gunner*, September 23, 1943 from "On The Lighter Side":

"There's lipstick on the drinking fount,
There's talcum on the bench;
There's cold cream on the turret lathe,
Hand lotion on the wrench;

An 'Evening in Paris' scents the air
That once held lube oil's smell;
I just picked up a bobby pin–
Believe me! War is hell!"

Neither title nor author was given. There was no by-line for the column.

The *Gunner*, October 7, 1943:

Margaret Clemens and Helen Richey are shown in a photo touting a U. S. War Bond drive. These women worked in the office of R. H. Spear, Controller and bond drive chairman.

Photos of idea winners included Esther Sonnenberg of the personnel office and Marie Strother. Strother was shown with her fellow workers Bob Edwards, Bill Bailey, Henry Kabusreiter, Hayden Percell and George Miller. Strother's job was not identified.

The *Gunner*, October 21, 1943: Stocking up lifeboats

With a photo taken at the lifeboat provisioning station, the story said, "Ann Heryford empties provision case as Elva Cecil and Viola Rice stow the food and water into the lifeboat lockers."

"Provisioning" in marine jargon means "to stock up". Before they were shipped to war, the lifeboats were stocked up with provisions to sustain their passengers for a prolonged period of time. The provision list included food and water, flare gun, life jackets, masts, oars and oarlocks, red sail, floating signals and two decks of playing cards. The picture side of the playing cards featured a Gunderson life boat in full, colorful sail.

The *Gunner*, November 4, 1943:

Four pictures of Gunderson tank lighter welders showed a high percentage of women. The photos featured the "Graveyard Galloping Ghosts", the "Day Shift Dynamoes", and the "Swing Shift Speed Demons." These crews completed a tank lighter hull in 24 hours flat, enabling her to be delivered a full four days ahead of schedule. None of the persons in the crews were identified. "So noteworthy was the accomplishment of Gunderson welders that the *Oregon Journal* plastered their pictures all over page one of their industrial section where the slow-pokes in other yards could envy them."

".....Pauline Harbin, welder in the Tank Lighter division, planked down enough cabbage to buy a $1,000 war bond two weeks after she joined up at Gunderson's Atta girl, Pauline!"

The *Gunner*, November 18, 1943:

From "On The Lighter Side":

"Linnton, we're told, has a lot more hatches to build and needs men to build 'em. Sorry, gals, there's a 'no women' rule at Linnton, but you might pass the word along to the boyfriend."

(But see September 9, 1943 above)

The *Gunner*, December 16, 1943:

There is a photo that shows a banged-up Army Plywood Assault Boat. Standing by the boat is Elaine Cramer, telephone operator and receptionist at the Front Avenue plant. Ms. Cramer was the future Mrs. Chester E. Gunderson.

Katherine Johns is photographed standing on the deck of a tank lighter bearing her name. She received this honor for outstanding attendance.

"First woman shop worker, Electrician Laura Wallin has a (tank) lighter named for her in recognition of close attention to job."

"Charlagne Tosi has invasion craft named for her as first woman production welder."

"Mae L. Brown had boat named for her as one of first women shop workers."

The *Gunner*, January 20, 1944:

A tank Lighter bears Cecil Brady's name. The honor was for being first day shift woman shipfitter.

Marie Strother was likewise honored for having no time off for a full year.

Lillian Frei likewise honored for her excellent attendance record.

Ruth Jester tank lighter bears her name because she was outstanding duplicator. (A duplicator transfers information from wooden templates to the steel from which the ultimate parts are cut.)

(A list of all women who, for various reasons, were honored by having a tank lighter named for them, follows at the end of this chapter.)

The *Gunner*, February 3, 1944:

"Pauline Harbin, welder in the Tank Lighter Division isn't taking any chances on where she's going to find a place to live after the war. She's got it all planned out, just the kind of home she's going to build, who she's going to be looking at across the breakfast table and how the house is to be paid for.

"Pauline and her fiancee (they'll be married in June) have accumulated $6,150 in bonds, $1,250 of which have been bought since Pauline went to work at Gunderson's last October.

"Best investment I've ever heard of, she said this week. 'We're going to buy a lot more of them, too!'"

The *Gunner*, February 17, 1944: Employees get help in filing income tax return.

"This week, Gunderson Brothers announces that they have a specialist right here at the Front Avenue plant with nothing else to do but help you get the proper dope down on paper for Uncle Sam and the State of Oregon. She is Mrs. Lulu McFadden, (pictured) who has a good many years of experience in accounting problems. This week Mrs. McFadden has taken a 'refresher' course direct from the Bureau of Internal Revenue and she knows the answers when it comes to filling out those complicated blanks for the income tax return."

The *Gunner*, March 2, 1944:

By purchasing $100 in war bonds, Alice Hughes qualified for the drawing in Gunderson's bond drive sweepstakes. A. E. Gunderson presented her the first prize, a $500 bond when her name was drawn from bowl.

The *Gunner*, March 16, 1944: "On The Lighter Side"

"It's worth staying through the graveyard shift these days just to meet Gladys McLaughlin, the new nurse on that shift. Glad to have you with us, Gladys."

The *Gunner*, March 30, 1944: "Sparks From The Shop":

"Waves and more Waves! Congratulations to Marie Ward! You're the first Gunderson Wave. Best of luck to you, sailor girl!" "Waves" means "Women Accepted for Voluntary Emergency Service", women of the U. S. Navy (excluding nurses); originally meaning those recruited from August 1942 for the WWII U.S. Navy Women's Reserve.

A photo shows Painter Irene Billings and E. J. "Gene" Quintieri, Plant Superintendent, talking things over with Collins K. (Bud) Billings, 20-year-old Portland Coast Guardsman fresh from the Battle of Tarawa during his visit to Gunderson. Billings also was introduced to Ida Mae Constantin, Scaler.

The *Gunner*, April 27, 1944:

"Mary Jo Henderson, who has been handling pay-offs in the Gunderson idea contest, goes over details with Maybelle Henderson, successor. Mary Jo left this week to marry

Sgt. R. S. Lay."

The *Gunner*, September 14, 1944:
A poem:

"Wimmin!
By Jack Cook
"For ages and ages women have been ,
The makers of homes, the mothers of men.
But now, since the war, you'll discover that she,
Has locked up the kitchen and hidden the key.

"She's taken the jobs that men used to have,
She uses less powder, but smears on more salve.
Regardless of accident, she's determined to be,
The boss of creation and rule out the he.

"There are women in Congress, women in halls,
Women on scaffolds building brick walls.
Women in offices, women in stores,
Women as salesmen, knocking on doors.

"She's driving the street-cars, she's driving the trucks,
She's driving the busses to earn a few bucks.
You'll find her in shipyards, you'll find her in shops,
She's out picking berries and apples and hops.

"She's plowing the fields, she harvests the grains,
She works on the railroad and handles the trains.
Even the Army, the Navy, and the Marines,
She's taken off dresses, she's wearing blue jeans.

"You'll see lady cowboys, and rodeo stars,
And she shoulders the men away from the bars.
You'll find her in night-clubs, getting her share;
You'll find them all over, they get in your hair.

"She's doing everything men used to do,
She skippers the ships and bosses the crew.
She drinks all the liquor, she smokes cigarettes,
And a man has to beg for the few that he gets.

"Meanwhile at home, the beds are unmade,
The kids are neglected, the bills are unpaid.
Dishes and vessels litter the sink,
And milk left outside is unfit to drink.

"If man does not stop them, their destination
Will be the quick end of civilization.
But in spite of her fame and high aspiration,
She must do her part for a new generation."

The *Gunner*, September 28, 1944:

For the Fifth War drive, Al and Chet Gunderson each headed up a team buying war bonds. The winning team received a feast of turkey and champagne. The losers got beans ands coffee. Due to the manpower shortage, the bean side of the dining tables consisted of many more women than men. They were dubbed, "bean bags". No names were given.

The *Gunner*, October 12, 1944:

Charlie Carson's "lucky seven" crew racked up a per shift record of assembling 60 bottom frames for tank lighters. Two women were in the crew. They were Mildred Quisenberry, and Pat Erott. The men were Paul Reviere, Blackie Wilmuth, J. E. Hutchinson and Albert Terry.

The *Gunner*, November 9, 1944:

Helen Richey and Margaret Clemens issue all war bonds bought by Gunderson workers.

The *Gunner*, January 4, 1945: Personality Parade

"Pauline Phelps probably gets growled at more than any girl in the entire Gunderson organization. Too bad, too, because Pauline has a swell disposition and likes people. It's just that she's the gal who translates the figures on a time card into figures on a pay check and sometimes those figures don't quite match up to what the guy in the shop promised the little woman he'd bring home. She's never made any serious mistakes that she can remember, however, and seldom has complaints that she's paid too much. With a brother and a boy friend both overseas, Pauline figures her figuring is helping get the boys home sooner."

"Gladys Haynes, swing shift scaler, says her job at Gunderson's is 'real easy' compared to raising four children on a 100-acre Oklahoma farm, where she and her husband plan to return after the war. He is a fitter at Gunderson's and both Gladys and Albert 'came to Portland to help win the war.'"

"Next time you run into Reva Mays busy with a little paint brush, ask her what she's doing. We promise you there's a lot more to being a duplicator than appears on the surface. Reva says it all boils down to transferring information from templates to steel but the figures she makes leave most of us still in the dark about the job. Anyway, Reva has been at the job for a year and nine months, she's not married and has a brother, Darryl, somewhere in England where he's serving as a first Lieutenant in Army Air Forces ordnance. Reva figures her job is making a real contribution toward winning the war and puts all her extra money into war bonds."

"One of the best reasons why Gunderson guys find excuses to visit the front office is Margaret Porter. Sorry, fellas, you're too late. Margaret is the mother of a two-year-old daughter 'who looks just like her daddy,' a chief aviation machinist's mate in the Navy somewhere in the South Pacific. Injured in action on an aircraft carrier, Margaret's husband is now in a Navy hospital. Margaret likes to think he may have received some of her blood plasma. She's donated four times and thinks it's her biggest war contribution."

The *Gunner*, February 1, 1945: Pat and Shorty Make Great Team

"When you really want to get a welding job done right and in a hurry, just toss that assignment over to Pat Trott and Shorty Sims on the swing shift at Front Avenue and the sparks will begin to fly. The two work side by side on production welding and Shorty,

despite his small size, turns out a man sized job on every job and shift." (Shorty was a dwarf.)

The *Gunner*, April 26, 1945:

"Dolores Long checks a few of the hundreds of supply items included in every new Porpoise life raft. Designed for safety and comfort at sea under emergency conditions, the raft carries everything from food and water to flags and mirrors for signals."

The *Gunner*, June 7, 1945: First YTL Harbor Tug Scheduled for Launching Here On Saturday

"Sponsor of the new vessel will be Mrs. Nellie Turnidge, swing shift toolroom clerk at the Front Avenue plant. A widow, Mrs. Turnidge is the mother of two sons, one in war work in Portland and the other with the Army overseas." She was nominated by fellow workers. She cracked a foaming bottle of champagne across the bow and the YTL-566 was eased down to the Willamette.

The *Gunner*, June 21, 1945: On Helen Richey

"Thousands of dollars worth of United States government bonds flow through the typewriter of Helen Richey every day. She's the girl who makes out all the bonds bought by Gunderson guys and gals. By the way have you bought your extra bond in the Mighty Seventh?" The "Mighty Seventh" was the nation's seventh war bond drive.

The *Gunner*, July 19, 1945:

"All dressed up like a South Sea Islander, Dolores Long, of Gunderson's plywood lifeboat division, actually is wearing a string of beads made of wooden floats for use on the rafts being built here for the Maritime Commission. This is just another one of those bad dreams The *Gunner* cameraman gets every once in a while when he gets tired of shooting grimmer subjects. Nice results, huh?" The floats made a giant necklace with several strands which hung to her feet. The "beads" were oval shaped pieces of wood about the size of a large pear and were threaded on rope.

The *Gunner*, August 2, 1945:

Ora Honnicut's ticket was drawn from a fish bowl and she won the first prize of $500 in the Seventh War Loan drive.

The last wartime *Gunderson Gunner*: August 16, 1945:

Reva Mays, a duplicator in the plate shop who has worked for Gunderson's more than two years was selected by her fellow workers to christen Navy tug YTL 567. It is not known who christened the remaining three YTL tugs in the order.

The *Gunner*'s "On The Lighter Side" said, "Wonder what excuse we'll use now for ducking the promises we've made to the little woman of what we'd do "when the war's over?"

The following is a list of Gunderson Bros.' women workers who were honored by having Tank Lighters named after them. Their names were stenciled on the sides and stern of the LCM's. When the landing ships were sent to war, the names stenciled on the sides were painted over and a code number substituted. The names on the sterns of the LCM's remained intact.

Name and date of *Gunner* issue:	Reason for recognition:
December 16, 1943:	
Katherine Johns	Outstanding attendance
Laura Wallin, Electrician	Close attention to job
Anna Ohler	"Scarcely missed a day on the job"
January 6, 1944:	
Charlagne Tosi	First woman production welder
Mae L. Brown	One of first women in shop
January 20, 1944:	
Cecil Brady	First day shift woman shipfitter honored
Marie Strother	"No time off for a full year"
Ruth Jester, Duplicator	Outstanding duplicator
Lillian Frie	Excellent attendance
February 17, 1944:	
Ida May Constantin, Leadwoman	Outstanding direction of women scalers
March 2, 1944:	
Hattie Howatt, Welder	"Praised for welding record"
March 16, 1944:	
Helen Williamson, Welder	"Speed demon welder honored"
Hallie Childers, Welder	Welding quality wins
Virginia Coons, Shipfitter	Outstanding shipfitter
Imogene Fagan, Welder	Quality welding wins
March 30, 1944:	
Alice Sherrer	"First woman welder on grave yard shift honored"
June 8, 1944:	
Alice Eadus	Outstanding production work, leadership and attendance
June 22, 1944:	
Lydia Burroughs	"Reflects highest tradition"
July 6, 1944:	
Francis Eaton	"Headaches for groggy axis"
Alice Dahl	"Headaches for groggy axis"
July 20, 1944:	
Leonora Larsen	"Delivering more than enough"
Martha Oppel	"Delivering more than enough"
August 3, 1944:	
Irene McIntyre	Excellent work record
Marie Wegner	Excellent work record

August 17, 1944:
Reva Mays ..... Outstanding performance
Nellie Turnidge ..... Outstanding performance

September 14, 1944:
Antoinette Groce ..... Outstanding production job

September 28, 1944:
Frances Woertendyke ..... Honored for production work
Lucille Mullin ..... Honored for production work

Tank lighters named for outstanding women workers
November 9, 1944:

This announcement concerned the first of the LCM(6)'s to be built by Gunderson. The previous vessels were LCM(3)'s. The woman whose name graced the first LCM(6) was an employee of the Supervisor of Shipbuilding, U. S. Navy, Portland office. She christened the ship, "Spindrift". The name signifies the spray blown from wave tops during a gale at sea. The Supervisor's office sold enough war bonds to pay for this and the next ship which bore the name of the Supervisor, Captain Leland D. Whitgrove.

Mrs. Marian Wilson Employee ..... Supships

November 23, 1944:
Ethelyn Shank ..... Secretary to Lt. Comdr..
James L. Braun ..... Resident Supships inspector

December 7, 1944:
Sarah McKay ..... Outstanding worker
Jim and Ella Fair ..... Outstanding husband and wife working team

December 21, 1944:
Clara De Jager ..... Delivered enough on time
Eileen Reilly ..... Delivered enough on time

January 4, 1945:
Leola Boyd ..... Did outstanding job
Alice Hughes ..... Did outstanding job

February 1, 1945:
June Jack ..... Honoring excellent work

March 1, 1945:
Irene Brame ..... Outstanding GB worker

March 15, 1945:
Estelle Pearson ..... Honored for excellence

March 29, 1945:

Jane Brooks (Author's secretary)	Honored worker
Alta Boyles	Honored worker
Pat Trott	Honored worker
Helen Storm	Honored worker

April 12, 1945:

Freda Cobb	Excellence on the job

April 26, 1945:

Irene Young	Honored worker

NOW, in all fairness to the men, here is a list of those men for whom tank lighters were named:

Name and date of *Gunner* issue:	**Reason for recognition:**
December 2, 1943:	
Albert "Al" Marlowe, Machinist	Flawless attendance
J. E. "Jack" Cook, Fitter	Best production idea
Isaac "Ike" Matson	Man-hour saver production idea
C. H. "Cliff" Nasshahn	Tanktop spreader idea
December 16, 1943:	
William W. "Bill" Smith, Welder	Outstanding labor relations and Shop Steward
Erhardt "Gary" Buchfink	Outstanding labor relations
January 6, 1944:	
Homer Brown, Welding Leadman	Rapid assembly work
Darrel Hansen	Outstanding attendance
Donald "Bill" Bailey	Production idea
Lloyd Moore	Winning essay on "Why I Like to Work at Gunderson Brothers"
Harold "Hal" Forbes, Leadman	Efficiency and quality of work
Sam Tracey, Auto Mechanic	Good installation work
Robert Edwards	Leads record breaking welding crew
Erling Bjarko, Welder	Efficiency in welding
January 20, 1944:	
Jim Cheney	Labor relations honored
Edward "Kirk" Kirkreit	Excellent paint work
Rudy Stelflug	Excellent attendance record
Julius Meyer	"Paint crew wins"
George "Frank" Stump, Superintendent	Outstanding work record
Harry Portis	"Production ideas win"
Ernie Pautz	"Tool room chief honored"
Louis "Babe" Dillman	Fine work in plate shop
Hanwey "Hank" Kabusreiter	Good production ideas

February 3, 1944:

Glen Kiefer	Production ideas, mystery ships
Julian Broadbent, Leadman	Honored for welding speed
Albert Hanson, Plate Shop	"Honored for handling all plate shearing"
Ben Lamb	Tanks, skegs and pilot houses his specialty
Glenn Riley, Machinist	"Heads all tank lighter machining at Linnton"
Wilbur Leutwyler	Perfect attendance at Linnton
James Potter, Leadman	Honor for ramps and bulkheads
Paul Galanis	Perfect attendance for 2-1/2 years
Keith Hansen	16 months near perfect attendance
Raleigh Wilson, Leadman	Pilot houses and miscellaneous parts.
Howard Smith, Welder	"Work on fuel tanks, ramps and bulkheads recognized"

February 17, 1944:

Elmer "Red" Wacken, Welder	First class welding

March 2, 1944:

Ted Oppel	Good job on gate shear
Ransom Sanders, Welder	Good welding work
C. C. Chandler	Side shell assembly work wins
Hayden Percell	Production idea
Carl Martin	"Praised for attendance"
George Goodrich	"Salvaging job brings honor"
Herman Lummus	Good attendance record
Ernest Zingler	Honored for his work in cigarette sales drive
Nelson "Bill" Guess	Production ideas
Ray Dahlgren	Organizing ability praised
Bernard Lewis, Welder Leadman	His crew's work recognized
Ray Kinchloe	Outfitting and Morale work praised.
Carl Pollack	Welding supervision honored

March 16, 1944:

Orban Arnold, Welder	Welding quality wins
Haven Unruh, Shipfitter	"Fitter wins honor"
Melvin McCoy	"His crew wins recognition"
Clarence Wallin, Mechanic	Mechanical installations win
Wayne Berlow	"Assembly work praised"
O. B. Sather	Production work praised
Roland Anderson	"Attendance record praised"
Paul Riviere	"Buoying speed honored"

March 30, 1944:

Hugh Shockley	Outstanding attendance
Pete Brajicich, Foreman	Excellent production record
E. L. Kannegaard	"Staying on the job wins naming contest for him"

April 13, 1944:

David Dobbie	Won for outfitting skill
Merle Eastman	Won for outfitting skill

April 27, 1944:

Chas "Chuck" Medak	Production ideas praised
Howard Peer	Outstanding outfitting crew
T. E. "Tom" McMillen	Work in judging production ideas honored.

May 11, 1944:

Fred "Fritz" Dummer, Machine Shop	"Sixteen months steady attendance honored"
Everett Fry	"Outstanding work wins"
Charlie Wahl, Shipwright Foreman	"Swell job as a carpenter"
George Taylor	Attendance record praised
O. O. "Dick" Hooper	Outfitting, attendance win
Dave Welch, Shipfitter	Production and good ideas win

Total now 80

May 25, 1944:

Robert Schwartzkopf	Production effort praised
Ole Randall	Outstanding production honored
Everett Hill, Electrical Foreman	"Honored for excellent production"
Cal "Boots" Pearson	"Shop committee work praised"
George Miller, Machinist	Shop committee work wins
D. J. Nolan	Outstanding attendance wins

June 8, 1944:

Harold Hedgpeth	Outstanding production work
Henry "Hank" Mosher	Outstanding production work
Joe Gredvig, Rigger Foreman	Outstanding production work
Clarence Fry	Outstanding production work
James "Pete" Teter	Outstanding production work
A. A. "Al" Brown	Outstanding production work
Kye Baker	Outstanding production work

June 22, 1944:

Wm. "Bill" Backus	"For excellent job done"
Adam Seeder	"For excellent job done"
Maurice Versteeg	"For excellent job done"
Waldo Dixon	"For excellent job done"
Ray Kellog	"For excellent job done"
Al Robinson	"For excellent job done"
Harry "Hop" Peterson	"For excellent job done"

July 6, 1944:

Erbet Pflueger	"Headaches for groggy axis"
Geo. Johns	"Headaches for groggy axis"
Fred Childberg	"Headaches for groggy axis"

Eddie Dallimore ..... "Headaches for groggy axis"
John "Jake" Jacobson ..... "Headaches for groggy axis"

July 20, 1944:
Sheldon Thomas ..... "Delivering more than enough"
Joe Kidd ..... "Delivering more than enough"
Lee Hamblin ..... "Delivering more than enough"
Harry Biancone ..... "Delivering more than enough"
Harry Williamson ..... "Delivering more than enough"

August 3, 1944:
Arlie Ackley ..... Outstanding production
I. M. "Babe" Brown ..... Outstanding production
John Vanek ..... Outstanding production
Wm. Feucht ..... Outstanding production
Joe Sprague ..... Outstanding production
John Coughlin ..... Outstanding production
Arno Weitzel ..... Outstanding production
C. W. Hastings ..... "Hasn't been late or absent a single day he worked here"

August 17, 1944:
LeRoy Tracey ..... Production praised by Navy
Wm. Bly ..... Production praised by Navy
Wm. "Bill" Fee ..... Production praised by Navy
L. W. Johnson ..... Distinguished engineer
LeRoy Faist ..... Production praised by Navy

August 31, 1944:
Walter Jarrell ..... Outstanding production record
Leon Ray ..... Outstanding production record
Johnnie Bly ..... Outstanding production record
Dick Boyd ..... Outstanding production record
Walter Hagenbucher ..... Outstanding production record
Chuck Colier ..... Outstanding production record
E. W. "Mickey" White ..... Outstanding production record

September 14, 1944:
Walter Gibson ..... Outstanding construction job
Robert Stewart ..... Outstanding construction job
Harry McIntyre ..... Outstanding construction job
A. R. Stensaker ..... Outstanding construction job
Jack Slough ..... Outstanding construction job
Roy Percy ..... Outstanding construction job
John Douglas ..... Outstanding construction job
Jimmy Wheeler ..... Outstanding construction job
Arthur Boisjolie ..... Outstanding construction job

September 28, 1944:
Clement J. Hogan ..... Honored for production work

Louis Gewntry ..... Honored for production work
Pat Mullen ..... Honored for production work
Chuck Mayhew ..... Honored for production work
Melvin Gedde ..... Honored for production work
Earl Higgins ..... Honored for production work
Gene Bentley ..... Honored for production work

October 12, 1944:
Robert Lauritzen ..... Outstanding worker
Ole A. Harstad ..... Outstanding worker
Roy Missildine ..... Outstanding worker
Wm. Young ..... Outstanding worker
Wm. Neff ..... Outstanding worker
Virgil Davis ..... Outstanding worker
Elmer Williams ..... Outstanding worker

October 26, 1944:
Tony Read ..... "They're good!"
Ray Bretthauer ..... "They're good!"
Alex Werner ..... "They're good!"
Chas Tunks ..... "They're good!"
Blackie Waldrip ..... "They're good!"
Lewis Perkins ..... "They're good!"
Jesse Hutchinson ..... "They're good!"

November 9, 1944:
Leland D. Whitgrove, Captain ..... U. S. Navy Supervisor of Shipbuilding (Supships)

November 23, 1944:
James L. Braun, Lt. Commander ..... Supships Resident Inspector
C. M. Brothers ..... Supships Welding and Hull inspector
Jack Weber ..... Supships Mechanical inspector
Tom Simpson ..... Supships Electrical inspector
Sam Clark ..... Supships inspection *
Louis Lynum ..... Supships inspection *

* The story accompanying these two names implied they were among the Supships inspectors. However, they may have been Gunderson honorees.

December 7, 1944:
Jim & Ella Fair ..... Outstanding husband and wife team
Robert Snyder, Electrician ..... Outstanding worker
Art Siebens ..... Outstanding worker

December 21, 1944:
Leroy Greene ..... Delivered enough on time
Lucas Meltch ..... Delivered enough on time
Conrad Forest ..... Delivered enough on time
Carl Strohman ..... Delivered enough on time

January 4, 1945:
Elmer Howatt ..... Did outstanding job
Bill Tatro ..... Did outstanding job

January 18, 1945:
Bill Keith ..... Honored worker
Garold Thompson ..... Honored worker
Angus Wilmoth ..... Honored worker

February 1, 1945:
Don Simmons ..... Honoring excellent work
Wesley Felch ..... Honoring excellent work
Alfred Pilewski ..... Honoring excellent work
George Manning ..... Honoring excellent work

February 15, 1945:
Lowell A. Wilkison ..... Particularly fine work
Al Wassgren ..... Particularly fine work
Leslie DeFreece ..... Particularly fine work

March 1, 1945:
Jim Sparks ..... Outstanding GB worker
Paul Blesener ..... Outstanding GB worker
E. M. "Benny" Lundquist ..... Outstanding GB worker

March 15, 1945:
Julius Denton ..... Honored worker
Wayne Heath ..... Honored worker

March 29, 1945:
Paul M. Cocks ..... Honored worker

April 12, 1945:
Frank Pekarek ..... Excellence on the job

April 26, 1945:
John Hoyt ..... Honored worker
Bob Isham, Superintendent Lifeboats ..... Honored for production record boat Division

May 10, 1945:
Glenn Chandler ..... Outstanding contributions
Tom Turner ..... Outstanding contributions
Lieut. J. W. Kennicott ..... Head of Technical division, Supships, Portland, Oregon

Kennicott was named "because of his extreme helpfulness in working out technical problems of production and his splendid cooperation in speeding the entire program."

Let it be remembered then, that in many ways, the women of Gunderson contributed heavily to the success of Gunderson, not only during wartime, but also through the growth years to and including the present. The future of Gunderson Inc. will continue to depend heavily on their diversified skills.

Chapter 8

Gunderson's Eugene operations

The auto mechanics

In September, 1943, the demand for General Motors engine spare parts rose rapidly; the diesel engines were so well received as replacements for gas-guzzling engines. Some of Gunderson's well-trained diesel mechanics were: Louie Gierster, Shop Superintendent, M. C. Wallace and his son, George, J. L. Edmund, A. L. Cavin, Leo Nelson and V. E. Heath. Aino Malinen was Bookkeeper. Thelma Haugk and Kathryn Cawrse were hired to take charge of the enlarged parts department. They filled the void created when Sam Fullman joined a competitor, Auto Wheel Service Company, a distributor of steel wheels and truck parts. Sam had been with the company since 1931, records indicate, at least twelve years. He had a thorough knowledge of these parts, and was sorely missed. These men and women had done their part in the war by keeping the diesel trucks and power plants running.

In October, 1943, the company received the distributorship of the Anthony Tail Gate loading device. This gate replaced the back-breaking job of lifting freight from ground level to the level of the truck bed. Operated by hydraulic power, driven by energy taken off the truck engine, the tail gate could be loaded at ground level, then elevated to the truck bed to permit sliding or hand-trucking the cargo to the inside of the van or onto the truck bed. The loaders caught on rapidly. Today they are an indispensable accessory for on-and-off loading of truck cargo.

Leo Nelson developed a diesel fuel injector testing machine. It consisted of an intricate set of gages which kept tabs on an engine's fuel injectors while the machine simulated the conditions which exist inside of an engine while it is running. His reward for this and other successes was the superintendency of the Equipment Division at 14th & Everett.

Planning the White Truck Co. franchise

In the winter of 1943, E. B. "Gil" Gilliland of White Truck Company, Charlie Sikes' mentor in the truck business, asked Charlie to go down to Reedsport with him to show a slide film to teach drivers how to handle their motors. "This was a fake," Charlie remembered, "Those drivers knew more about how to handle their motors than the manufacturer did." It happened that nobody showed up at the slide show.

"Over a six-pack of beer," Charlie added, "the two of us talked about the future of log and lumber trucking in Oregon." Gilliland had a brochure which had been put out as a promotion by Roseburg Plywood company. The brochure contained a statement that one-sixth of all standing timber in the United States was in six Southwestern Oregon Counties, where Gunderson had the White franchise.

They started talking of, (1) what was Sikes' future in the truck business and (2) a thing that had to happen was that a suitable service outlet had to be located somewhere in that area.

On the back of some blank checks Charlie drew up some basic ideas to shape a service outlet in Eugene or Roseburg. The next step was to convince Chet and Al of the need for such a center. They were interested.

In January of 1944, Sikes took a trip to the White Truck Co. offices in Cleveland, Ohio, with the Roseburg brochure in hand. He was making his presentation to the Dealer Sales Manager, Nev Bauman, who stopped Sikes, saying, "Wait a minute. Mr. Black, the

Chief Executive Officer of White, would be interested in this story." Black was called in and the three pondered the proposal for two hours. Charlie then returned home. The upshot of this was that White in Cleveland, through Gilliland, notified the Gundersons that if they were to keep the White Franchise, a service plant had to be down there in the lumber territory.

Eugene, Oregon chosen for Gunderson service outlet

Shortly thereafter, Al Gunderson and Sikes went to look at Eugene and Roseburg to decide on a location. Al bought a five acre tract for $4,975 in North Eugene which was under the water table, but in a very strategic location.

Chet then went to Eugene and took Leighton Johnson, the company engineer, with him to draw some basic building plans. In no time, the land was filled to street level. Plans were made. Rudy Krause, Chet's head field carpenter, and his crew arrived in Eugene to begin building.

During the building of the Eugene operation, Chet went there frequently to watch the progress and, while there, stayed at the Eugene Hotel.

Gunderson carpenters refused credit at Eugene hotel

The carpenters peeved to Chet about their problems with their expense accounts–a tedious chore for the carpenters–taking too much time to fill them out. So Chet went to the hotel manager to find out why the carpenters couldn't sign for their lodging and meals. The hotel could send Chet a bill at the end of each month. The officious manager decreed that such a procedure was against the policy of the hotel.

Chet decides to own Eugene hotel

Elmer Keller, a real estate friend of Chet's happened to be with him at the time and, seeing Chet's reaction to the hotel's policy, quickly ventured, "Why don't you just buy the hotel and change the policy?"

The two of them went across the street, according to Charlie, and "hugged a light pole, looked over at the hotel and concocted a meeting of the stockholders of the hotel." It had been built in the early twenties by public subscription in order to enhance the community's tourist attractiveness. The only item on the agenda would be an offering to pay all of the stockholders the going price for their shares. They found out that a Portland investor, trying not to attract too much attention, had been buying up the hotel stock, share by share, at a discount. The major stockholders got worried, got together and decided not to sell unless all sold. The silent acquirer was out-maneuvered due to the short notice of the meeting, the substantial offer and the fact that Chet had hired all the best lawyers in Eugene to garner the majority of the voting rights in the meeting.

In a few weeks the Gundersons owned the hotel. A friend of Chet, Earl McGinnis, who was with the Multnomah Hotel, gave Chet a quick seminary on how to run a hotel. With feverish pace, Chet was busy for weeks refurbishing, painting and decorating it. He installed new, first class door locks and hardware. He laid new, beautiful hardwood parquet flooring, imported from South America, in the ballroom. He replaced all of the toilet seats and bathroom accessories. It was a first class remodel job. When Chet embarked upon a new project like this, his purchasing department could expect a rash of rush orders for anything akin to the job at hand, and would rearrange its priorities to suit Chet's schedule.

Sikes becomes general manager of Eugene operation

Charlie hadn't been appointed General Manager of the Eugene operation. Al and Chet hadn't officially decided who was going to run the service center. Before Charlie found out who was going to run it, he quickly booked up the operation and got it running and making money. Getting an allocation for 25 trucks and selling them before the paper work arrived from the government was the thing that really helped him get the job as manager of the Eugene business. "We opened for business in January, 1945, with $25,000 for working capital, and Chet's one piece of advice. He said, 'Charlie, don't ever ask us for any more money,' and we never did."

April of 1945 saw the new Gunderson Bros. Equipment Division in full production selling White Trucks as a distributor, re-powering trucks with General Motors diesel engines from Wheel & Rim in Portland, selling the trailers made by the Front avenue plant and curing trucks and trailers of any problems that arose. The service center was equipped with every modern device needed to analyze and repair–from electric welding, precision machine work, generator and electrical system diagnosis to steam cleaning and re-paint. The operation was manned by a staff of skilled mechanics and experienced parts technicians.

Trucks, diesel engines and generators provide good market

Charlie continued, "Trucks were still under allocation, and at the beginning of the year we knew how many we would have and I would ration them to customers who were standing in line to buy. This went on for some two years, and the sale of diesel engines for sawmills gave us more sales volume than the truck lines. At the peak there were some 400 sawmills in our area and most of them used GM diesel power."

Remembering the early Gunderson financial crises, General Motors Corporation required them to furnish semi-annual financial statements and detailed monthly floor inventories.

There was a good market for stationery power beside sawmill use. A stationery unit consisted of, basically, a General Motors engine hooked up to an electrical generator. A typical installation was at the Borden Company's Chemical Division plant at Springfield, Oregon. The plant manufactured formaldehyde and adhesives. They needed a steady and adequate supply of electrical power. A power outage would not only cut production time but would also ruin all materials in production at time of the outage. Adhesives would harden and the maintenance crew would have a difficult time cleaning up. After a power outage the diesel generators would start up within thirty seconds. There were many such units delivered for commercial use.

Sawmills and logging industry served

Charlie said, "We also took flyers in electric motors, sawmill equipment and wheeled logging yarders. The use of GM diesels in sawmills drew Eugene's attention to other sawmill machinery, and sales came to include 'Swede' gang mills made in Seattle, gear boxes and Reliance Electric Motors, and a twin saw 'Scrag' mill built in the Eugene shop. Later, with the help of Leighton Johnson at Portland, ventures in sawmills led to the design, manufacture and installation of a 50,000 board foot sawmill at Point Arena , California, 'Portable' Sawmills on wheels, and some on skids made in the Portland plant None of these, after about 1950, were as important to us as the sale of truck and trailer equipment and the operation of the repair shop which most of the time carried our basic overhead."

The salvage of logs less than 16 inches in diameter led to manufacture of the twin saw "Scrag" mill in the Eugene shop. It had two movable saws somewhat on the principle of the Gunderson Gang Saw. (the gang saw is described later in this history.) The movable saws were mounted on a horizontal shaft and moved in and out so as to make two vertical cuts with one pass of the log. For a time this mill was a "hot" sales item.

Sikes continued, "Eugene (Division) had a continuing relation with Front Street. Both in the design and manufacture of logging trailers, and in design of sawmill equipment and portable sawmills there was close contact and cooperation. The Eugene staff also had a strong influence on the design of trucks for hauling logs, and by virtue of the sales volume controlled (we) could require factory built changes in components that made the trucks more efficient for the tough logging operations and more profitable for the operator."

The Big Y market – One of first mall-type shopping centers

A year or two after the Eugene plant was opened, Chet developed the strategically located, five acre property to include "The Big Y" market. This was a shopping center occupying three acres adjacent to the Equipment Division at 2200 West Sixth Avenue in Eugene. This was one of the first of the mall-type shopping centers in the Willamette Valley.

Gunderson finance division organized

In 1958, a Finance Division of Gunderson Bros. Engineering Corp. was organized as an aid in the sales of the trucking equipment in Eugene. This division carried paper at one time of about $7 million, all in truck financing. This division was also acquired by FMC Corporation in 1965 but was later liquidated.

Tracing Sikes' history until his retirement

Charles E. Sikes continued running the business for the Gundersons while they still owned it, then for FMC Corporation until May 1, 1968 at which time FMC decided to sell the operation. It was part of the deal when FMC bought all Gunderson operations except the hotel in June of 1965.

Charlie's history with the company ends with the following notes written by him:

"Early in 1968, Dick Zahnhiser was President of Transport Equipment Leasing, an offshoot of Consolidated Freightways. He was acquainted with Forrest Simmons, the President of First Farwest Corporation, which was primarily in the insurance business, but had a leasing business also. They decided there was a fit between the insurance activity which had much financial clout with the reserves which premiums developed, and the equipment sales business which used much borrowed money to support the contract sales of equipment.

"About the first of March, 1968, Dick went to San Jose and talked with Bart Van Eck (Corporate Treasurer of FMC Corporation) about purchasing the Eugene truck operation. They agreed on a basis for the deal–purchasing assets at book value. About the 15th of March, Dick came to Eugene to talk with me, and he asked if they made the deal, did I think the operation would prosper, and would I stay on as Manager. Both answers were affirmative and six weeks later the sale was completed. (It was long afterward that I learned that Bart had told Dick that a condition of the deal was that I would stay with the operation; he was that kind of a man– great to work for.) The operation continued without a hitch, retaining its identity as Gunderson White Trucks.

"In mid-1971, the principals grew ambitious for the equipment division and began looking for areas of expansion. The White Truck operation at Albany was bought from Harry Proud, followed soon by Fageol Motors at Seattle, Sacramento White Trucks, a parts house in Coos Bay and the five-shop Utility Trailer and Thermo King group with stores in Fresno, Modesto, Sacramento and Redding. The parts group finally had stores in Seattle, Portland, Coos Bay and Sacramento.

"This equipment empire, which grew out of Gunderson White Trucks, was no longer a part of the Gunderson story, and started to go down hill by the late '70s. The decay of the transportation equipment business generally led to sale or closure, and by summer of 1987 it was all gone as part of First Farwest."

On March 1, 1975, Charles E. "Charlie" Sikes, President of the Transportation Group of First Farwest and its thirteen operations and centralized credit organization ranging from Seattle, Washington to Fresno, California, retired from full-time employment. He continued at half time in charge of a centralized credit and insurance control department for three years.

He now lives in Portland with his wife Grace, plays a little golf, and keeps busy with his yard, woodworking and volunteer jobs. He maintains his business and civic perspectives through his membership in Rotary and Portland City Club.

— Getting On Track To Success —

Chapter 9

Survival of a shipyard

War ends–Gunderson turns to peace time pursuits

War with Germany ended eight days after Adolph Hitler committed suicide on April 30, 1945. General Dwight D. Eisenhower received the surrender of the German forces to the United Nations. Harry Truman was president at the time. He signed a proclamation of the event May 8, 1945. World War II ended and peace came to the world on August 14, 1945 when Japan accepted terms of unconditional surrender.

Millions of workers returned to their peacetime activities throughout the country. Several hundred Gunderson employees wondered about their future. Many of them returned to their former civilian jobs.

GB poised to go forward and compete

From the standpoint of facilities, the Gunderson company was in good shape. It had a good sized steel fabricating shop, a marine railway and, relatively new shipways, Ways No. 1.

All of the machinery, welding equipment and tools it had accumulated, qualified the company for entry into nearly any field of work requiring steel. This was a vital key to its growth. All it had to do was fill up the place with industrial and marine type work.

When the war ended Gunderson Bros. had to make a rapid transition from defense work to peace time business. It wanted to retain as many of its skilled people as possible.

During the war years GB had expanded its facilities with each new major project. Chet barely let the paint dry on a new building before he started another.

Gunderson's Linnton plant was closed and sold to a maker of wooden toys for children. Gunderson's Front Avenue plant was more than adequate for the uncertain prospects at the time.

Gunderson thanks its defense workers

The words, "Congratulations all!" appeared above a photo showing only the bare armed hand of a working man shaking the suit-sleeved hand of an un-named company manager. This appeared in the last war-time issue of the *Gunner*, August 16, 1945.

L. S. "Stanley" Baier, Gunderson's Chief Engineer and Works Manager at war's end, said, "We salute you people for doing a grand job and we hope you can look forward to a well earned rest and life of happiness and contentment."

Looking forward to commercial marine work

After the war, Baier left the company to found a highly successful shop that made boat scuttles, hatches and other marine gear. The scuttles, designed by him, were used on the 80 foot commercial fishing trawler that Gunderson delivered in 1945 to the Yaquina Bay Fish Company. Baier also designed the trawler.

Though built before the war's end, it was Gunderson's anticipated entry into peacetime commercial marine business.

The brother's business style

Al and Chet ploughed the company profits right back into the plant to improve its cost efficiency and increase production. They knew that increased sales depended on that. When a certain job depended on a machine we didn't have but would do the job better and cheaper, Chet was easy to sell on the idea of buying it.

Repeatedly, Chet would ask me to get bids on a certain kind of machine. Every piece was "rush rush" and of the highest priority. When Chet wanted something, he wanted it "yesterday".

That's probably the reason most of my associates and I developed a sense of urgency– it rubbed off, both him and Al, on to us. That was how we learned to solve the tough, seemingly impossible, problems assigned to us by the brothers through the years. The brothers were tough on anyone who said it couldn't be done. The word "no" seemed to be missing from their vocabulary. That spirit of persistence spread to most all employees. Some unidentified employee coined the company's unofficial motto, "Can Do."

The original tract of land at Front Avenue was mostly river bottom with a small forest of willows and other riverbank brush. In 1942, there had been some shacks in that brush near the river bank where some of the less fortunate lived. A few houseboats were moved near the bank upstream from Ways No. 1, Gunderson's only ways other than the marine railway on the downstream side of the Front Avenue plant.

In those days, the U. S. Army Corps of Engineers kept dredging the bottom of the Willamette River to remove silt to restore its depth for the sea-going ships that plied it. They always needed land on which to deposit the dredged-up silt, sand and gravel.

In 1943, the *Gunner* shows a dredge pipe spewing river bottom materials at high pressure onto the lot at the back end of the original buildings. As soon as the silt-laden water drained back into the river, and the silt had a chance to settle, Gunderson was able to build a steel storage area on the new land. The dredging also enabled them to build an outfitting basin adjacent to the then existing wet dock, (later replaced with the present "finger pier").

A 1943 plant photo shows the water side of the original plant with the old marine slip and new Ways No. 1 under construction (really steep bank) and a wet dock designed to rise and fall with the river level.

There was a standing request to the Corps of Engineers for dredged up land-fill but their operation near the Gunderson' plant was not frequent enough to satisfy GB's needs. So Chet continued to ask me to get more fill materials. I contacted all the dump truckers, building wreckers and excavators and let them know that they could use our land for dumping their loads. Soon there was a steady flow of dirt, rock, broken concrete and foundry slag which continued for years. It was enough to reclaim several acres of the property from the river bottom and swamp and to raise it to plant level.

From property plans that still exist, Leighton W. Johnson has estimated the Front Avenue plant to be about 11 acres with acreage under cover of a little over 1.1 acres in 1942; 2.21 in 1945; and 2.5 in 1947. He figured Gunderson had 51 acres of land in November 1966 with 13.04 acres undercover.

Wealth of metal working and construction experience

They had gained a wealth of metalworking experience, particularly in forming and welding of steel. To eliminate outside buying, the machine shop learned how to make the hundreds of parts that go into machines to make them work.

The shop certainly knew how to build and paint steel boats and ships. Baier's Yaquina design gave us an added dimension in boat building.

Our carpenters were among the best. We had Charlie Wahl, Charlie Lynn and Joe Huserik. They had built Gunderson buildings, ships' cradles, furniture, cabinets and had repaired damaged army pontoons.

Gunderson's strategy was to zero in on their best bets

With their locked-in war business ending, it was natural that they focused on what they could do best in a competitive environment: which was building boats, tanks, logging and machinery trailers. But their welding and metalworking expertise qualified them for a higher level of steel work, something that would satisfy their larger capacity for work. It was logical, therefor, that they considered it possible to fabricate and erect buildings, bridges and much bigger tanks than they had ever built before.

They also saw opportunities in the manufacture of sawmill machinery, such as portable sawmills, gang saws, resaws, edgers, trimmers and conveying systems. There was a big pent-up demand for housing and building lumber that the war had thwarted.

Finally, they were ever on the lookout for the "pot of gold", that could be found with a product they could mass produce successfully.

Gunderson blessed with leaders

The company's success rests on the entrepreneurial nature of the two Gunderson brothers and their people. Combined with their skills, their stick-to-it-iveness, (a term often used by Virgil C.Hatfield, former plant manager), and their originality, several important incidents led to the ever-increasing success and expansion of the company.

Specialists picked for team leadership

The two brothers were aware of the need for building their leadership teams. They were skilled at identifying a particular need and filling it with qualified men.

Several proven leaders remained after the war and they were ready for the transition. Two were Leighton W. Johnson, Chief Engineer and Thomas J. Larsen, Sales Engineer. Both of these men were soliciting jobs, designing and bidding them and landing them with their quotes. Leighton leaned toward sawmills, marine and work involving mechanization. Larsen went after structural steel work.

Other leaders were Raymond H. Spear, Controller who kept the finances of the company under strict control; Larry Preuss, a construction engineer who kept busy engineering Chet's building projects and in whom Chet had implicit faith; and Henry Baum, Jr. shop superintendent at the time.

Johnson worked with all of the foregoing on barge and sawmill construction estimates and sold a great many units himself.

There was fine and forceful management in the plant. E. J. "Gene" Quintieri was Plant Superintendent. He was supported by capable foremen like Henry Baum, Jr. who eventually succeeded Quintieri. To name a few more leaders there were: Archie Crews, Fritz Dummer, Everett Hill, Joe Huserik, Dorman Jackson, Al Marlowe, George Miller, Bob Snyder, Thad Stevens and other long term employees many of whom are mentioned elsewhere in these writings.

Gunderson had been looking for someone who could coordinate the various sales efforts, work on estimates, and sell the jobs. The company needed clout to open doors for Gunderson's sales force. It was then that "Doc" Sundt's experience and contacts provided a solution to that problem.

Helmer J. "Doc" Sundt, was hired in March 1946 to become General Sales Manager and replaced Baier. His degree in Civil Engineering, his Post Graduate work at

Massachusetts Institute of Technology, his three-year stint with the U. S. Corps of Engineers in Portland and his four-year, voluntary service in the U.S. Navy as a Civil Engineer, certainly qualified him for his role at Gunderson.

Doc's naval service included various construction projects ranging from 18 months at Guadalcanal to various duty stations in the United States.

Sundt, Johnson, Larsen, and William E. Love, were all instrumental in focusing Gunderson into heavy steel construction, barge and ship work, sawmill work and tank building.

(Johnson's background has already been outlined in chapter 17.)

Larsen was the first to encourage the company to go into steel fabrication, which he estimated and solicited. Prior to his association with Al and Chet, he had been a mechanical draftsman for Pacific Car & Foundry and King Bros., both steel fabricators.

Gunderson's first structural steel building, was shipped in 1944 to the Hanford works, Richland, Washington. According to Larry Preuss, Construction Engineer, they needed the building in a hurry and asked for short cuts. Preuss suggested welding the connection pieces on instead of riveting. They agreed, much time was saved, the building was expedited and Gunderson received a warm letter of commendation from Hanford. Riveting took four men to do the job that one welder accomplished in this instance. A Gunderson first!

In 1947, Love, a former Steel Pipe & Construction Co. tank engineer, brought to Gunderson a wealth of tank engineering knowledge. His reputation followed him with a stream of tank and pressure vessel inquiries, which he estimated and sold.

Sundt said that while at Gunderson Bros. his associates were Mr. Spear in accounting, Ernie Pautz in shipping, Henry Baum, Shop Superintendent, until he was replaced by Jim Childs. The engineering personnel were Johnson, Bob Utzinger, and Asst. Engineer Preuss. Utzinger assisted Love on tank projects.

Sundt reported to Al Gunderson on a strict monthly schedule. He designed a sales record which listed each inquiry quoted. The tally included the name of the customer and its representative, Gunderson's salesman who quoted, the type of work quoted, key dates, bid prices and remarks. In the first column, most easily found, he penciled in the initials opposite each job , "L" or "W", for lost or won . Only eight months of these records were found, beginning with December, 1948 and ending with July, 1949. Over the eight month period, out of a total of 248 jobs that were bid, 85 were won, or about 34%, one out of three. The majority of entries in the sales record included bids by Johnson, Larsen, Love, and Sundt. The winning bids covered a variety of bridges, a cyclone, chutes and conveyors, hoppers, dredge pipes and flanges, miscellaneous iron work, tank work, and a smoke stack.

An interesting win was a job worth about $5,000 for grid plates for Davidson Bakery of Portland. Another $26,000 was for tunnel ribs, supplied to Peter Kiewit Co.

Never lacking variety, Gunderson performed jobs for "Shorty" Bartlett, Vancouver, Washington, his full name has been lost, who did business under two company names, Budd Tractor and Armor Farm Implement Co. Budd's orders were for dozer blades and land terracers. Armor's were for hay rakes. Bartlett's orders received in March, 1949 amounted to almost $10,000. This business occurred over a several month period.

Sundt's reports to Al Gunderson also included the 14th Street operations. The salesmen reported their sales contacts and results to him. One of them, Donald L. Simpson, traveled all over the State soliciting sawmill work and diesel engine conversions for the company. The report included the inventory of diesel engines at the uptown branch.

It was thus, that during Sundt's term as General Sales Manager, Gunderson began its entry into peacetime commercial business.

Sundt was recalled to active duty in the U. S. Navy, November 1, 1951, despite efforts by Chet and Al Gunderson to get him deferred.

Howe replaces Sundt

When Sundt left in 1951, he was replaced by Warren L. Howe, Jr. as General Sales Manager. Howe spearheaded Gunderson's efforts in the steel business to even greater heights.

For six years prior to being hired by Gunderson, Howe had been associated with a Portland engineering consulting firm, Stevens and Koon, as assistant to R. E. Koon. Prior to that, for two years, he was Chief Engineer for Northwest Iron Works and, for one year, with the U. S. Corps of Army Engineers in Portland.

Later, as the projects got larger and more complex, Howe's title was changed to Contract Manager. This was because he not only compiled estimates for bidding and sold the work but managed the projects by coordinating the efforts of all departments involved. He would handle the business end of the work and Leighton and John Hohler would provide the shop with working drawings. Johnson still quoted sawmill work and barges.

Howe kept meticulous records of steel fabricating costs, i.e., number of feet of welding per hour on given thicknesses of steel. After each job he would accumulate more data which would broaden his information base. As a result each ensuing bid was more accurate and competitive than the previous one. Occasionally, one would backfire. In 1954, the company lost money on the Steamboat Slough bridge job. Howe and Al Gunderson had picked up some false "street gossip" about the job and grossly underbid it. Howe said about one out of every six bids became a job for Gunderson.

Then there were jobs which he won by astute bidding but never got. After the bid opening for work on the Wanapum Dam near Priest Rapids in Washington, Howe had been promised a substantial order by the prime contractor and had begun detail work and ordering of materials. He was then told he had been underbid and was not going to get the job after all. Gunderson's sued the contractor for breach of contract and won, but in appeals court they lost. By that time they could not afford to spend more on litigation so they dropped the case.

The company sees its strategy working

The first peacetime barge job, completed in December, 1946, was a 100 foot long barge, "El Rey", for harvesting kelp off the coast of California. It was equipped with mowers with side bars to mow and collect the kelp in nets. The customer was Kelco Company, San Diego, California. In 1989, Kelco was listed as a division of Merck Co.

During 1946, a fireboat's rusty and pitted hull was repaired for the City of Portland. It's rotted hand railing was replaced. While in Gunderson's custody, heat from a burning torch caused an explosion which extensively damaged the hull. The tab for the repairs was picked up by Gunderson and its insurance company. No one was hurt in the accident.

Also in 1946, about ten coal hauling, van-type trailers were converted for the USSR under Lend Lease. They were built like battleships. Each had an axle with eight wheels and tires on the towing end! The rear axle assembly included two axles, similarly equipped! They were built to haul a very heavy load of unidentified material.

During the same period, ten four-wheel, all steel trailers were built for Yugoslavia under Lend Lease. These had flat steel wheels with spokes, a pipe frame and a swiveling

steel tow bar. Though much more primitive looking, they resembled the steel carts that, in years past, were used by bell hops in railroad stations to carry loads of suitcases and baggage.

The tanks

Gunderson had manufactured small gasoline and oil tanks for years, until 1947. When W. E. "Billy" Love arrived at Gunderson they hadn't had the services of a bona-fide tank engineer.

He launched the company into the business of selling municipal water storage tanks and towers and huge chemical and oil storage tanks and pressure vessels. He was not shy about tackling tanks made of stainless steel, which Gunderson had used only in limited amounts. His tank jobs were complicated installations that required precise maneuvering of cumbersome sections.

Love had a knack for arriving at the lowest cost of making and delivering tanks. Prior to bidding his jobs, he sent his material take-off lists to me for pricing. Without exception, when he saw the prices I put down, he grimaced in pain and exclaimed, "Oh Geez, that's too much. Can't you do better than that? We'll never get the job with these prices." After a few heated interchanges of opinion, he would give up, bid the jobs and win a goodly share of them.

Love's first major job, in 1947, was building and erecting two stationary and one elevated storage tanks for wood pulp liquors. The customer was Crown Zellerbach Corp., Camas, Washington. The tanks were made of stainless clad steel plates. Clad steel was regular carbon steel with a very thin skin of stainless steel bonded to one side of the plates. During the same year he supplied four tanks for roofing compounds for Pioneer Flintkote Co.

Some of the other tank jobs sold by Love included:

Elevated water storage tank for Russelville Water District, Portland, Oregon, 1948. The tank stood on four steel pipe legs and a central standpipe. An engineer on the project, Robert W. Utzinger, who worked at Gunderson between 1947 and 1955, said that after the tank was erected an earthquake occurred. Even after a good shaking the tank suffered no damage.

500,000 gallon water tank for City of Portland at Sellwood, 1948.

250,000 gallon elevated water tank for the U. S. Veteran's Hospital on Marquam Hill in Portland, 1949. It stood on six pipe columns and a central standpipe. Utzinger told of a mishap to this tank. "There was a picture in *The Oregonian* showing the tank with one leg pulled out from under it and it was still standing."

50,000 gallon water tower at Clackamas Heights, Oregon. Love's crew demolished an existing wooden tower, and put up the new tank on the same site, 1949.

311 underground petroleum storage tanks ranging from 1,000 gallons to 25,000 gallons each in capacity were bought by Texas Company in 1949. When these tanks were about 50% delivered, Texaco wanted to cancel the balance. When Love told them all of the steel was already cut, most of it formed and in process and that the tanks couldn't be canceled without a big charge, Texaco took the tanks. The tanks weighed a total of about 441 tons.

Sand tower for locomotives for Union Pacific Railroad, 1949.

Launch a tank piggy back

Three batch tanks for Ross Island Sand & Gravel Co., March, 1953. Customer wanted tanks loaded on his crane barge for the haul up the Willamette River to Ross Island.

Gunderson didn't have a crane to lift the tanks from shore to barge, so the tanks were loaded and lashed aboard a navy barge which was due to be launched the day that the tanks were to be shipped. They then launched the barge into the river where the customer's own crane barge waited to transfer the tanks from our barge to his.

Clarifier and chlorine tanks for Multnomah County's Fanno Creek Sewage Treatment Plant, Denny Road, at West Slope, Portland, Oregon, 1953.

75 foot high by 30 foot diameter standing water tank for the City of Portland at Collins Water District back of Riverview Cemetery; water reservoir at Southwest 37th & Dakota St.; reservoir for the City of Portland at Mt. Scott; and a tank farm of six 5,000 barrell petroleum tanks for Richfield Oil Corporation. All in 1954.

An elevated water storage tank for the City of Corvallis, Oregon, capacity unknown. Four pipe legs with a central standpipe, about 100 feet from the ground to its catwalk, 1957.

A gas and oil tank farm of unknown gallonage for Standard Oil Company in Portland.

A 3,000,000 gallon standing water tank for the Rockwood District of Portland, Oregon.

A 115 foot diameter, 50 foot high standing storage tank for Union Pacific Railroad Co., 1958.

Tugboat water polo

Gunderson's logistic ability was always challenged. In August, 1960, Columbia River Paper Co. of Salem, Oregon bought a 26 foot diameter, spherical stainless steel tank for storage of acid.

The question of delivery of the sphere posed a dilemma due to its size and shape. Love decided the best way to deliver the tank was on the Willamette River.

The tank was floated upriver to Salem, pushed by a tug– "the first ever shipment of a tank on the Willamette without barging," someone said. Of the sphere, one newspaper captioned their article, "Having a ball on the Willamette." Another news photo of the tugboat Maria pushing the steel sphere up-river titled it "Tugboat Water Polo".

It really wasn't the first time Gunderson had delivered by floating its product on water. In 1952, Gunderson floated two of six bridge caissons, essentially tanks, towed by a tug, down the Willamette to the Columbia River, then upstream to Pasco, Washington where Kansas City Bridge Co. built a bridge for Northern Pacific Railroad Co. They would have shipped the other four by water, but by the time they were ready, unseasonably low water in the Columbia prevented the tow, so they were loaded on a barge instead. At the job site, the contractor filled the caissons with cement and sunk them for use as bridge piers.

It wasn't the last floated shipment, either. In October, 1961, Gunderson hired a tug to tow a $662,000 floating caisson gate to the Bremerton Navy Yard in Bremerton, Washington. The gate was 176.5 feet long by 63 feet high by 20 feet wide and weighed 960 tons.

A 500,000 gallon elevated water tower, 110 feet high to its catwalk, 132.5 feet high overall, for the City of Portland Water Bureau at Parkrose. This huge tank can be seen from freeway I-84 near Parkrose. It has unauthorized but delightful, colored roses painted on its oval belly. After the unidentified artist painted them without permission, there was quite a controversy, but reason won out and the roses were not painted over. Built in 1961, it was the last big tank project undertaken by Gunderson and Love.

In between the water tank jobs, Love designed and supervised the manufacture of dozens of lumber treating retorts and other tanks requiring strict conformity to A. S. M. E. (American Society of Mechanical Engineers) codes for pressure vessels.

One end of the retort tanks was equipped with a cast steel, hemispherically shaped and rubber-sealed door on hinges. The door could be closed and locked so tightly that escape of the enormous pressure generated during treating of lumber was impossible.

Another of his jobs was a five foot diameter by about 120 foot long catalytic refinery column, built in 1957. It was so long that it took a truck on one end, supporting and towing, and a trailer pushed by a truck on the other end, supporting and pushing, to transport it to its final destination.

Love retired in the early 1960's but resumed his career when former Gunderson plant superintendent, N. L. "Nick" Thomas started his own Pacific Tank Company in 1965. Johnny Hansen who had been a Gunderson line boss and Larry Preuss, Mechanical Engineer went with him. Needless to say, with all that talent, Thomas's business became a resounding success.

Howe's bridges and buildings

In 1947, Gunderson seriously entered into fabrication and erection of structural steel beams, girders and other members for buildings and bridges. One of the first and most successful was the Oregonian Building, 1320 S.W. Broadway in Portland. Gunderson erected about 500 tons of steel beams and girders for that building. Warren L. Howe, Jr. pursued this type of work.

Other buildings and bridges for which steel was fabricated and erected were:

Pioneer Flintkote Company Building on Northwest Front Avenue about half mile down river from the Gunderson plant, estimated 100 tons, 1947.

Bridge erected at Washougal Washington, estimated 100 tons, unidentified building contractor, 1948.

A Bridge across the Toutle River in Washington, estimated 100 tons, unidentified building contractor, 1949

Federal Reserve Building at 915 S. W. Stark Street in Portland, 700 tons, bid was $159,675, unidentified contractor, 1949.

Also during 1949, steel for an overhead Bridge Crane was supplied, estimated 75 tons, to U. S. Corps of Engineers at McNary Dam.

Four whirley crane bases, 50 foot span for U. S. Corps of Engineers at McNary Dam. Bases were erected in shop, loaded on a barge and sent up-river to dam site, 700 tons, 1951.

A bridge for Green Peter Dam in Washington, estimated 100 tons, 1953.

Ten sets H beams and fabricated bracing, two buildings for servicing ships, a gangplank and a camel for drydock, 240 tons, 1953. The "Camel" was a structure comprised of timbers and steel framing for retaining a drydock in place.

Bridge at Hood River, Oregon, about 225 tons, 368 feet long and 32 feet wide. It had to fit a different elevation at each end plus it was on a curve in the highway. A precision job for the Gunderson shop. For accuracy it was fabricated upside down, 1953.

Steamboat Slough bridge, 750 tons, between Marysville and Everett Washington on Interstate 5. M. P. Butler, General Contractor, Customer, Washington State Highway.

I-5 bridge across Rogue River near Grants Pass, Oregon, 300 tons.

Bridge across Coos Bay for Tom Lillebo, General Contractor, customer Oregon State Highway, about 400 tons. All in 1954.

During 1955, Gunderson furnished and erected steel for a warehouse for Fruehauf Manufacturing Company, 72 tons.

The same year they did a building for Gunderson's File-A-Way parking system, featured later in this chapter. The ten story parking building, about 150 tons, housed Downtown Parking Company, a Gunderson-owned enterprise, after they took it over from the original owners, Bohman's, a downtown retail grocery operation.

They also fabricated and erected steel for an overcrossing North of Canby Oregon. Customer was a joint venture by Weyerheuser Lumber Company and Crown Zellerbach. General Contractor, General Construction Company.

During 1956, steel and erection was supplied for three buildings. The customers were Owens-Illinois Glass Corp., 5850 N. E. 92nd Drive, Portland, 500 tons; Portland State University, 350 tons and Carborundum Company Vancouver, Washington, 200 tons. These were the last buildings of any size done by Gunderson. Ross Hammond Construction Co. was the prime contractor for the university building. Donald M. Drake Co. oversaw the construction of the Carborundum building. The glass company's contractor could not be ascertained.

Other bridges, buildings and tanks are listed in a separate table in Gunderson Inc.'s library that includes all known, major projects accomplished by Gunderson and its successor companies through 1984.

Warren Howe likened his experience with Gunderson to the days of the Wild West, "Disorganized in an organized way, with team work by the Gunderson leaders as the real key to its success."

A critical first in steel construction–welded plate girders

Howe recalled that Gunderson was one of the first companies to go into all welded steel plate girders. Because the welded steel plate girders were built in various thicknesses and widths according to where the strength was needed, bridges and buildings could be made lighter and less expensive.

Innovative/cost effective

These girders differed from standard steel mill sections because they were not the same thickness through the whole length of the section. They could be thin where less strength was needed and thicker where a lot of "beef" was necessary.

Over a period of close to three years culminating in 1958, 698 of these girders totaling 4,500 tons and worth about $1.5 million, were supplied and erected by Gunderson for construction of the east approaches to the Morrison and Hawthorne Streets bridges. Some girders weighed 36 tons each and were 123 feet long.

On March 22, 1955, prior to winning the Morrison bridge job, Howe spoke to the Oregon Teamsters appealing for their backing to make sure that this bridge was fabricated locally, to help Portland employment and to keep the money for the bridge at home. At that time, he said, "5,000 are unemployed in the metal trades in the greater Portland area, scarcely 100 (are working) at Gunderson compared to 850 a year ago." The talk appeared in an Oregonian guest editorial at the time.

Howe was afraid that a "big steel" fabricating firm, like U. S. Steel's American Bridge, would grossly underbid us like they had done in the past.

Two of these fabricated beams, 122 feet long and weighing 29 tons each were used, in 1959, to span the I-5 freeway (Baldock Freeway as it was called at the time) at Southwest Barbur Blvd. and Terwilliger Blvd. in Portland. Kuckenberg Construction was the

general contractor for that job. The beams, when installed, provided a clear span, without supports, over the freeway.

No steel mill could have supplied those two beams!

Gunderson phased out of steel bridge and building fabrication

The next and last big job for welded steel plate girders, the Marquam Bridge approaches, occurred over a three year period ending in early 1965. Gunderson supplied 3,500 tons of girders, worth an estimated $1.5 million for this $13 million bridge under a sub-contract to Peter Kiewit & Sons Construction Co., Omaha, Nebraska.

With a barge-mounted crane rented from Zidell Explorations, Inc., GB men hoisted Girders 196 feet long, weighing 70 tons each into place more than 100 feet above the river!

Much of this work was delayed during the winter of 1964 due to high water in the Willamette River.

Bridge and building fabrication phased out because, by 1962, Gunderson was well into railcar building, where the real money could be made, and sales turnover was much more rapid.

The last trailers

Gunderson continued building logging trailers until the early 1950's but the market became saturated because so many companies were into trailers exclusively and Gunderson couldn't compete.

In 1947, the Portland area trailer manufacturers, as a group, produced 4,500 trailers. Apparently, the others were much more competitive than Gunderson because its share of that total was very small indeed – about 100 or less per year. The list of trailer makers consisted of Fruehauf Trailer Mfg. Co., 1,500; Page & Page, 1,250; Trombly Truck & Trailer, 400: Wentworth & Irwin, 235. The rest of the 1,165 were split up between Beall Pipe & Tank, Walker Trailer Co., Pointer Co. and Gunderson.

In December, 1949, Al Gunderson wrote a letter to Walter Motor Truck Co. declining to bid on logging trailers. He suggested they contact several of the builders mentioned above.

Period of trial and error

Going from one-of-a-kind-to mass production items

Gunderson Bros. recognized the need for a transition from the one-of-a-kind custom shop jobs they had been taking, to jobs that required many units, thousands if possible. While the "single copies" were mostly profitable, they were sold in a competitive environment and therefor not too enriching.

There was a trial and error period during which they undertook to produce and market some highly unusual products, but the period was mostly error.

It was understandable that, in marine, a single unit was feasible and usually profitable. But there were some large barge orders "out there", in Gunderson's future.

The single, most important peacetime job was the Spillway Gates for McNary Dam in 1952. Gunderson's experience in building these structures would provide a basis for entry into the mass production of welded, mechanical structures. These will be detailed later in this chapter.

Pots of gold at rainbow's end (for someone else)

Between 1945 and 1950, dozens of inventors asked Gunderson to design, manufacture and market new ideas. None of the inventors had the money to fund the products. Gunderson rejected most of the ideas they looked at; but some of them, when picked up by other companies, became enormously successful.

One of these was a motorized rototiller. GB made a prototype but couldn't get its costs down low enough to suit the inventor so he took the idea elsewhere. It caught on immediately and is a popular home and farm tool today.

Prototypes were made of insulated, hot mitts for housewives' to ease handling of pots and pans. There was a lightweight aluminum ironing board to lighten milady's clothes pressing. There were aluminum car top carriers for skis and luggage. Gunderson looked at all of these but couldn't get prices down enough to suit the inventor, so they were taken to other manufacturers. Others recognized the potential for these products and marketed them. Those items are still selling, worldwide in the millions of units.

Quonset huts

A famous and revered product developed during World War II was the Quonset Hut, a portable building that came in kits like an erector set. It consisted of corrugated, galvanized steel siding, lightweight steel framing, doors, hinges, bolts and nuts, all nested together very neatly, and shipped in a compact bundle with an instruction sheet telling how to erect it.

Unlike a conventional building with its four sides straight up and down, two sides of the hut was curved, not flat. Both of its ends were indeed flat and vertical like in a regular building. When erected on a simple foundation, the building had a round roof which started from the ground on one side of the building, curved upward to the top of the building then curved back down to the ground on the other side like a McDonald's Hamburgers arch.

Developed during World War II by the Great Lakes Steel Corporation, Detroit, Michigan, the Quonset buildings were bought by the armed forces by the thousands and shipped all over the world.

It was used for living quarters for G.I. Joes and Generals alike. It made a storehouse, hospital or chapel.

When war ended, the Quonsets were readily accepted for farm buildings such as barns and silos. There were thousands of the huts in war surplus. These were snapped up rapidly. Great Lakes had such a good thing going that they continued marketing the Quonsets after the war through a national distributorship arrangement.

Gunderson Bros. became enthused about the building and became a distributor. In late 1946, a building for storage and re-shipping of the Quonset was erected on a v-shaped piece of property across Front Avenue from the north end of the 4700 offices. The building that Chet erected for this new line became known as the "Quonset Building", though it was of standard construction, not a Quonset. A salesman was hired to sell the building kits. Chet's building retains its name to this day.

Competition kills Quonset idea

Gunderson did very well on the Quonsets for about two years, but several other steel companies were quick to see the potential for these pre-fabricated steel buildings. They came out with versions more conventionally shaped and saturated the market with them.

There weren't any sales records on the Quonsets but several carloads were brought in and it is estimated about 180 of varying size buildings were sold in 1946 and 1947.

Pricing became so competitive that Gunderson couldn't make money on them so they discontinued that line.

A folding boat

One invention which was thought to be a sure winner, was the "Foldcraft", a folding, collapsible, plywood pleasure boat. It was invented by Ben Randrup, a native American, and funded by Gunderson Bros. This product occupied center stage for about two years, from 1946 to 1948.

The unique boat consisted of several pieces of waterproof plywood in various shapes held together at their adjacent edges by waterproofed canvas which was glued and copper-riveted onto the plywood to form a flexible or hinged, yet leak-proof joint. This allowed the adjacent pieces to be hinged or folded.

When the sides, bow and stern pieces were unfolded, and the loose seats and braces were placed in their respective slots, the unfolded craft became a rigid boat.

When folded flat, the boat was easy to lift to the top of an automobile equipped with cartop carriers. These carriers were also made and marketed by Gunderson for a time, but as previously said were discontinued because their price was too high.

The first Foldcraft was tested in the Willamette River by Randrup and several Gunderson workers including me. There is a photograph in the files showing the test boat and its occupants. Heavily loaded "to the gunnels", the boat passed its test with its load of enthusiastic passengers. Those doubters on shore were also convinced of its seaworthiness.

About 2,000 ten-foot and twelve-foot models were built by Gunderson and sold throughout the country by the E. J. Lilygren Company, a San Francisco distributor.

During its sales life, the ten foot boat retailed for $129 and the twelve foot boat, $139. Lilygren's discount was 40% when the boats were shipped c.o.d., which netted Gunderson a price of $83.40 and $77.40 each respectively. The cash price to Lilygren was $75.00 and $70.00 each.

Foldcraft sinks

During the war, the plywood makers developed a process to make their plywood waterproof. This was the same plywood that was used in the thousands of lifeboats produced by Gunderson. It was the same product, or was supposed to be, that was used in the "Foldcraft."

In about a year, after several hundred of the folding boats had been delivered and hundreds of others were on hand or in process, claims began coming in for leaky boats. The plywood mill had delivered panels with defective interior plies that were not solid–an unseen and undetectable defect. This enabled water to seep through the plies, to damage the plywood and to cause the boats to leak.

To stop the leaks, Gunderson shipped repair parts all over the country and even exchanged new boats for leaky ones but the claims still kept coming in.

In the end, a settlement was received from the plywood company but it was not enough to prevent a substantial loss. Once all the claims were settled, Randrup's royalties were negotiated and the line was discontinued and closed out. Randrup received a royalty of $5.00 per boat for the first 600 boats and $4.00 each for the balance.

In April, 1949, Randrup wrote Al Gunderson and asked if there was any more royalty money – "things hadn't been very good with me–or in place of money could you send me some canvas and rivets. I'm thinking about building a few boats to sell." All Al offered Randrup was a list of inventory for $10,000. Randrup didn't have that kind of money. As

it turned out, Gunderson could have given Randrup the parts free. They laid idle for months and were eventually scrapped out. Years afterward, satisfied owners (whose boats didn't leak or were repaired) were asking for the newer models. A Texaco Oil Company salesman, who called on me for years, was ecstatic in his affection for his "Foldcraft".

Gunderson lifeboats turned up as pleasure craft

The Foldcraft boat was not the only pleasure boat built by Gunderson. After the war, when Gunderson's lifeboats began turning up in war surplus stores, they were snapped up as pleasure boats. There were many inquiries for new ones when the supply dried up. Hindsight tells us that boat would have been a real winner.

1948 Vanport flood

On Memorial Day, in May, 1948, the City of Vanport, a World War II shipyard city of 18,000 inhabitants was flooded out when a railroad levee bordering it, broke. The city's location was on the site now known as Delta Park, adjacent to highway I-5, in North Portland.

A heavy snowpack had melted rapidly during an unusually warm May and the Columbia River was at flood stage and crested. An *Oregonian* News photo taken at the time showed scores of two-story defense houses floating in the lake created by the flood. All of its residents were evacuated except for fifteen who were drowned or unaccounted for.

Pork barrels

At that same time, Chet Gunderson's farm in Scappoose was inundated. Chet called Joe Huserik to go tend to an old 400 pound sow and her brood on the farm. They were brought up to the Front Avenue plant in a pickup.

Ernie Pautz made a temporary pig pen with empty oil barrels and wooden cribbage near Pete Gonzalez's paint shop. The old sow nudged one barrel and the litter got loose. Joe put it this way, "The old sow rooted her way out."

While they were being rounded up, someone got the idea to bring one of the piggies into the office. Elaine Cramer (Later Mrs. Chet Gunderson) painted its snout with lipstick. Then Joe Huserik and Ernie Rosier took the piggy into a secretary's office and held it on her desk in a pose with its paws poised over a typewriter as if to type a letter. Hugh Ackroyd happened to be there and took a picture. When the secretary returned to her desk she saw the porkie, screamed and ran up the hallway. The piggie, frightened too, ran up the hallway and hid away in Billy Love's office under his desk, unbeknownst to him. Joe said, "Billy was all flustered," when Love found the beast in his office.

Of the other animals that were rounded up at Chet's farm, Joe related, "We rounded up those cows that had broke through the fences and ran into the hills above Scappoose. Louie Anderson's fences were no good. They were scattered all over – some running all over on people's places....." Louie Anderson was a long time, good friend of Chet's. He ran the liquor store in Linnton.

Steam cleaner

Gunderson made a few units of a steam cleaner during 1948, but it was unsuccessful due to safety problems that developed. It was a boiler on wheels which could be towed behind a truck. It had an oil burner to heat the water to steam and a hose and nozzle to spray the steam. Even though it had the necessary safety valves and pressure gauges, the equipment was inherently troublesome.

Equipment and facilities expanded

As their business expanded, so did their buildings. Existing work bays were lengthened and new bays added. With expansion they needed more bridge cranes with which to lift the steel beams, tanks, and bridge and building girders while they were in process.

Always hunting bargains in machinery, we heard there were several idle bridge cranes in the unused Vancouver and Portland shipyards. I contacted Bill Shenker, a surplus dealer who owned the rights to sell off all the assets of these yards, and got prices from him for the cranes. Shenker's price for the several cranes, which we bought over a period of five years was about 35% of new price. Complete with crane rails, copper trolley wire and trolley wheels, the cranes needed modernizing and altering which was performed by Gunderson's machinists, steelworkers and electricians.

Machines renewed and altered by GB technicians

Much of the machinery brought in for the peace time work was second hand, bought at bargain prices. With the "know how" of electricians, Everett Hill and Robert Snyder, and machinist Fritz Dummer, these machines were easily brought up to current standards. They were altered in length or size to suit their new locations.

Some of the old machinery bought in the forties still survives. A water-pressure operated bull press that was bought at the urging of William E. "Billy" Love still works efficiently at straightening, bending or forming steel beams as needed. It was built by its maker to last an eternity! It was already ancient when Love found it.

When shipways number 3 was built and a power winch was needed for it, Chet went back into the woods and bought a log-yarding winch from one of his logging friends. The motor wouldn't work because it required direct current electricity, to which Gunderson's plant was not hooked up. They were on three-phase alternating current.

I believe Everett Hill told Chet he could make the direct current motor work with an electrical converter which transforms one kind of electrical current into another. He even knew where we could find one that would change our regular alternating current to direct current. So, for a few hundred dollars for the winch, and a few hundred for the converter, Chet had power at the head of the new ways for lowering of barges or boats into the water or even hauling small ones out for repair.

L'IL TOOT

During 1954, Gunderson built a small log pond boat and for some reason it couldn't be sold, so they kept the boat for yard purposes. Somehow it got christened L'IL TOOT.

The L'IL TOOT would ply out into the Willamette river and salvage loose logs that came floating down from logging or sawmill operations somewhere upstream of the plant.

According to John Hohler, during the building of the ship ways, Chet would not approve the expense of paying for wood pilings to be driven under the ways where they entered the water. So "Big Joe" Huserik, head carpenter, sent the L'IL TOOT out into the river for floaters as they passed by and got enough to put under the ways so it would support a launched barge without collapsing.

Learning the perils of buying

Buying of new machinery was always an interesting and tricky business. I had to be careful to specify everything in my purchase orders; and obtain a signed agreement from the supplier that the purchase order terms would be fulfilled. From buying problems in

the company's earlier days, I learned to protect the company better with each experience. Some of the my buying experiences were costly.

In the early 50's, when I bought a radial drill press made in Italy, it was touted as superior to all other makes available. In the order I failed to say that the machine should conform to local electrical codes. The end result was, before the local government inspectors would pass the press, the electricians had to completely re-wire it to meet the codes.

On another occasion, on Chet's orders, I bought a used sandblaster from a local paint contractor, a good friend of Chet's, who was in bankruptcy and who was relocating to Alaska. After using the machine for a few months, a part broke and one of my buyers, Jack Herron, telephoned the original supplier to ship a repair part. During the conversation, the supplier asked Jack for the serial number of the machine, to ensure that the correct part was shipped.

A day or two later, the supplier's president called me and informed me that the paint contractor (Chet's good friend) had not paid for a machine with that serial number and that there was a lien that entitled them to re-posess it, though he suggested a peaceful settlement. After negotiating a settlement with the supplier, the lien was settled and I learned another valuable lesson: to secure a clear title for any used machines bought. Chet was furious at how he had been "taken in". I would have liked to listen in to the conversation between Chet and his friend after that happened.

Boat and barge work scarce for a while

After Gunderson had delivered the kelp barge in 1946, there was not much barge work until 1951. In between those years Gunderson spun its wheels, unprofitably, repairing small boats and barges and re-powering tugs with General Motors diesel engines.

They delivered a YTB tug, (Ocean going barge-towing vessel) for the U.S. Navy June, 1947.

They converted a navy surplus LST (Landing Ship, Tank) to a fishing vessel in 1948.

Also, in 1948, they built two small "Fender" barges and some dredge pontoons for the Port of Portland. The pontoons were floating tanks that supported the dredging pipe that ran between the dredge and the shore.

Then in 1951, they hit "pay-dirt" by selling three pineapple and sugar barges to Young Brothers, Ltd., and Oahu Land & Railway Co., of Honolulu, Hawaii. These were the largest barges made since the 200 footer was built for for Gilpin Construction Co., in 1944. They were 175 feet long, 11 feet deep and had a beam (width) of 45 feet.

Two of the barges were delivered in the Fall of 1951 and the third in 1952. The first two were $110,000 each and the third was $160,000. A new fireboat, the Abner T. Langley, built by another yard in Portland, was shipped to Hawaii in a cradle aboard one of these barges.

Several in the office, who had never done the hula in Hawaii, had fun musing about catching a ride into the setting sun aboard the sugar barge.

***Gunderson Gunner* resumes publication**

In December, 1952, the *Gunderson Gunner* resumed publication after a silence of over seven years. The last previous issue was August 16, 1945 when World War II ended. Bill Selleck, still in the public relations business at that time, resumed his office as Editor and Photographer of the paper.

The *Gunner* was a valued asset to me in preparing this history.

Barge and shipbuilding business "takes off"

During 1952, Gunderson continued its penetration into the marine barge market by building 23 - 120 foot 33 foot beam, 10-1/2 foot deep, Sea-Going Dry Cargo barges for the U. S. Navy. These brought in almost $2 million.

A photo appeared in *The Sunday Oregonian*, February 10, 1952 showing Gunderson's boat outfitting basin and 14 of the barges awaiting delivery. The caption read, "Three shipyards turn out barges by the acre." The identification of the other two yards has been lost so their names were not available here. The fact is, Gunderson alone was producing them by the acre.

They also built an 81 foot barge for Oregon Pulp & Paper Company that had a draft of only 21 inches. It was shaped to run up on the banks of the Willamette River for loading and unloading of the customer's 52 ton crawler crane.

They finished the year by shipping a 60 foot dredge to the Cascade Plywood Corporation of Lebanon, Oregon. This dredge was used to maintain Cascade's log pond. The dredge was referred to as "Cascade's Navy". The shop completely assembled the dredge, then cut her into five segments for shipment to Lebanon by rail. Then GB men unloaded the cars and re-welded the segments and launched her into the pond.

Just as they were finishing up the 23 Navy barges in December 1952, Howe announced that the Navy had bought 33 more of the deck cargo barges, five liquid cargo barges and two refrigerated barges all 120 feet long. The 33 barges were finished in 1953 and the remainder of them were finished in 1954.

The Navy designated Gunderson as the lead yard for the dry cargo barges because they bought additional barges of the same type from other shipyards, one of whom was Marinette Marine Corp., Marinette, Wisconsin. The lead yard was responsible for a unified design so that all vessels would be the same, their parts interchangable, and cheaper. Gunderson supplied another 33 shipsets of parts including chocks, bits and other fabricated items to Marinette and the other yards. As lead yard, Gunderson also stocked the Navy's supply depot with some of the parts.

More tank lighters built for navy

This new Navy order included another $6 million lot of 190 LCM(6) 56 foot Landing craft (tank lighters) like the ones built during the war. These lighters were designed to haul 34 tons of cargo, usually consisting of a heavily loaded truck, a tank or other military vehicle and personnel. They were completed in 1954.

The barge and LCM jobs under the guidance of Jim Childs, Plant Superintendent, were very successful. (More detail of Childs' career with Gunderson follows later.)

Due to high water in 1953 a barge got "hung up" on the shipways. It wouldn't launch. The Port of Portland's powerful sternwheeler was engaged to tow the barge off the ways and into the river. The high water wasn't "all bad" because it signaled that a proposed, 10% slash in power consumption would not be necessary.

The navy ordered ten additional LCM(6)'s for delivery in 1955.

Then, during 1956, 22 of the LCM(6)'s which had been built by Gunderson in 1954, and which had been stored at the U. S. Army's Beaver Terminal in Clatskanie, Oregon, were sent back upstream to Gunderson for modifications. Then they were sent to the Mona Lisa Sea Cove Arctic Re-Supply Mission in Northern Alaska.

McNary Dam spill way gates ordered

Not to be outdone by the marine department, Gunderson's structural shop, in 1952, won a job for several million dollars to construct 24 upper leaves and 13 lower leaves for

spillway gates and 88 - 36 foot stop logs for the McNary dam on the Columbia River.

The gates weighed thirty tons each and were about 50 feet long.

A competitor had just finished building some of these same gates and had entered the bidding on this additional job. We all felt that our rival would come in with a very low bid based on his experience. But the contrary happened, he had problems and had raised his price.

After all the bids were opened, Gunderson found it had underbid its next lowest competitor by about $680,000.

As was usual when GB was the low bidder by a wide margin, Al Gunderson felt not elation, but panic. He was furious and couldn't sleep. Chet Gunderson, always calm under pressure, jokingly said, "All we can lose is the bid bond for about $300,000, so let's go ahead with the job and see if we can't come out at least even."

The whole group of us managers put our heads together, figured out how to save on material and labor and, in the end, the job was not a loss, but an astounding success. I'll never forget how smooth and calm a negotiator Leighton Johnson was when he was working out the details of the gates with the customer. A less able go-between may have left us in jeopardy of losing our shirts.

We also received an order from the Corps for 24 sets of fish screens to prevent fish from going through the gates into the dam's electric turbines.

During 1953 they furnished the Corps two steel lifting beams for lowering the spillway gates into place.

Work on gates enriches know-how

This order for the gates and stoplogs was closer to mass production in heavy welded structures than anything attempted before.

To repeat, there were 37, 50-foot long gates and 88, 36-foot stop logs. That was approaching the idea of mass production. This footage of work enabled Gunderson to study and buy the best and fastest welding and burning equipment made.

In addition to the need to speed up the welding, the job requirement was precise. The long structures had to be held to within very close tolerances during and after welding. They couldn't be wavy, crooked or unbalanced except for a special camber (warp) that had to be built in.

The gates were mechanical in nature, having two huge roller bearing wheels mounted on heavy tapered axles that were attached to the end of each gate.

When Gunderson completed those gates and stop logs, their technical know-how was vastly enriched. Gunderson was no longer a one-of-a-kind shop. The building of these gates gave Gunderson valued experience in making heavy, welded mechanical structures in quantity.

Gate work shows talent for mass produced structures

GB was ready to tackle and could compete on the biggest of bridge jobs involving scores of welded girders. Although, GB had not thought about it yet, they were ready to tackle railcar underframes, and eventually, entire railcars.

Out of the spillway gate job emerged an appreciation for the talent with which the company was blessed.

The plant superintendent at the time was James "Jim" Childs. He managed the construction of the gates. He and his men knew the gates had to be built with a maximum straightness tolerance of twelve one-thousandths of an inch in the 50 foot structure.

George Miller, a mechanical foreman at the time, brainstormed a "gunsight"

technique for making sure that the structures were within tolerance before and after final welding and assembly. His idea was to drill sightholes at precise locations through the two bearing shafts on each end of the gate leaves. The *Gunderson Gunner* of December, 1952, said of his idea, "So precise is this job that 1/8 inch hole drilled through the bearing shaft at one end lines up perfectly with a similar tiny hole in shaft at the other end, a distance of nearly 50 feet." Miller said that a tiny light beam was flashed through each of the holes at one end of the gate. If the light beam could be seen through the corresponding holes at the opposite end of the gate, the structure was perfectly square and in line.

Aside from their size as a structural job, the gate leaves posed many mechanical problems. Each end of each leaf (or gate) was equipped with two forged spindles (axles), on which self aligning, tapered roller bearings were mounted to serve as wheels when the gates were raised and lowered. The inside races of the bearings had to be boiled in oil to expand them for a shrink fit over the roller bearings after they cooled. A similar process was required for the protective housings covering the bearings' outer surface.

The 300 rough forged spindles were machined to about 10" in diameter on one end and tapered down to 7" on the opposite end. Fritz Dummer, the machine shop foreman, had his men machine the bearing surface of the spindles to a finish about equal to the back surface of a wrist watch. It was a delicate job but Fritz did it all with his existing shop machinery. The job turned out beautifully and those gates are still performing their function up at McNary Dam.

Jim Childs–A unique and brilliant manager

While the gates were under construction, Childs not only oversaw that work but he managed the marine construction and all other plant activity. Yet he still took the time to help the company's marine engineers by re-drawing all of the 120' navy barge working drawings and designing many barge parts that could be made in-house cheaper than they could be bought on the outside.

He was a brilliant man who worked too many hours a day, but by so doing, he ensured the success of his people and the projects they undertook.

Mike Illias, retired Group Purchasing Manager, recalls Childs as an Englishman. Mike said Childs had a very loud voice, and at the launchings, he didn't need a megaphone to be heard, barking out his instructions.

Childs was somewhat of a philosopher and loved to quote the works of others such as Henry Wadsworth Longfellow's "The Ladder of St. Augustine":

"The heights by great men reached and kept were not attained by sudden flight; but they, while their companions slept, were toiling upward in the night."

Those thoughts were reflected in the hundreds of extra hours he spent on his job. When the LCM project, previously mentioned, began, he wrote a message on his bulletin board, "LCM's Go Like Hell," and they did.

Wedge-shaped cradle improved for launching

Childs inaugurated in Gunderson's shipbuilding practice a wedge- shaped cribbing which would facilitate construction of a ship on a level, horizontal plane instead of the yard's old custom of building a vessel tilted toward the water. He fastened steel plates to the launching skid rails to act as hydra-planes to force the buoyant timber of the cradle to go down and under the structure as it entered the water. This enabled the yard to retrieve the timber so that it could be used (most of it) on the next launching.

Prior to that time it was necessary to tow the barge at a fast clip in order to force the remaining timbers out from under the ship. The Shipwright was Charles "Charley" Wahl and his carpenters were Fred "Swede" Chillber, Charley Lynn and "Big Joe" Huserik.

There is no record of when or why Childs left the company. I believe it was some time in the mid 1950's. In any case, Gunderson lost a valuable resource when he left.

N. L. "Nick" Thomas replaced Childs as Plant Superintendent. Under his forceful leadership, Gunderson achieved mass production of railcar underframes and railcars. (This period will be covered in a later chapter.)

Paint pots

The company tackled anything on which they thought they could profit, including an occasional far fetched, extraordinary job. .

This was the case with 6 kettles for plastic paint reducing and 30 kettles for paint built for the U.S. Navy in 1953. The plastic paint was a two component system which ended up as anti-fouling coating for the bottom of ships. The kettles melted the resin and mixed it with a hardener, then the spray kettles with their electrically heated hoses delivered the paint to the surfaces to be painted.

No outside machining without Fritz's blessing

Throughout all the years Fritz Dummer was Machine Shop Foreman, neither my buyers nor I bought any machined parts or material to be machined without Fritz's final blessing. His knowledge of shaping metals with machine tools, his skills and his foresight resulted in enormous savings. This contributed substantially to the company's competitiveness.

Throughout his career at Gunderson, Fritz was called upon to do a wide variety of machine shop work such as making air and hydraulic cylinders for railroad cars and ships. The inside surface of the cylinders required very finely machined surfaces to accommodate the equally smooth piston rods–so fine that they had to be honed and chrome-plated to prevent pressure leakage.

Fritz's keen eye enabled him to become a skilled horseshoe player. He almost won the Class B, Portland city championship in August, 1973. On his retirement March 28, 1979 the purchasing department found a maker of professional horse shoes and presented him a pair.

How to File-A-Way a Buick

GB searched for innovative projects

With its talented work force, Gunderson kept pursuing innovating products. One good example was the File-A-Way parking machine, which is explained later in this chapter.

By March, 1953, Gunderson had expanded its original plant to include a marine launching rail-ways capable of pulling a barge or boat out of water and up onto the ways for dry-dock repair. They also had a new covered shipbuilding ways, a fabricating building on the west side of Front Avenue, and three fabricating bays heading up river to the Texaco Co. dock.

Competition in steel fabrication grows sharply

As already mentioned, during the late forties and fifties, Gunderson became a heavy steel fabricator of bridges, buildings, elevated water storage towers, ASME code

(American Society of Mechanical Engineers) pressure vessels and retorts, water and petroleum storage tanks and miscellaneous steel work.

Among the most notable of these jobs were the Oregonian Building, (1947) ; the Federal Reserve Building, (1949) and, of course, the McNary Dam spillway gates, (1952).

The largest bridge projects in Gunderson's history were the Morrison Bridge and Hawthorn Bridge approaches in 1958 and the Marquam Bridge approaches in 1964. These were covered earlier. According to Warren L. Howe, Jr. both of these jobs ran well over $1 million.

The competition was keen. In tank building there was American Pipe & Construction Co., King Bros., McCulloch & Sons and Young & Sons. In steel fabrication there was American Bridge Company and Consolidated Western, both divisions of U. S. Steel Corp., Bethlehem Steel Corp., Chicago Bridge & Iron, Isaacson Iron Works, Poole & McGonnigle and Western Pipe & Steel.

Gunderson gains Marine expertise

Simultaneously, Gunderson became an efficient and highly competitive barge and boat builder. They increasingly saw boat and barge building as a means to reduce their reliance on steel bridge and building fabrication for revenue.

Uptown shop continues operations

Meanwhile in January, 1953, Gunderson's Equipment Division at Northwest 14th & Everett Street in downtown Portland was doing a good business in General Motors diesel engines. By that time they had set up a distribution system serving a territory of all but five counties in Oregon, the six border counties in Washington and two California counties. Charles E. Sikes, Equipment Division Manager, provides elsewhere in this history an interesting account of the early Gunderson years and the evolution of the Equipment Division into truck distribution with headquarters in Eugene, Oregon. Such "old-timers" as Leo Nelson, shop foreman; Louie Gierster, mechanic; and R. L. Michaels, Parts Manager were with the company at that time.

Artisans of their trade

The success of Gunderson was assured by the people who built its products and attracted its customers with quality work. If any one factor lifted the company from its meager beginnings to the giant enterprise it became, it was the skill and resourcefulness of those employees. They had the talent to offer that extra ingredient that separates the mediocre from the very best. Gunderson employees routinely brought forth great, money-saving ideas. In a manufacturing activity such as Gunderson there are always a few who rise to the top of their professions. Their skills enable them to produce artful results whether it be in the making of patterns, jigs, fixtures, templates or 'home-made" contrivances to speed up manufacture of a product for sale.

The gismo men

Where ingenuity was concerned, Benny Richardson deserved "top- rung". He came to work for Al & Chet at the uptown plant in 1940 after being a mechanic for nearly 25 years before that. The *Gunner* reported in April 1953, "He ran a bulldozer over the ground at Front Avenue when '4700' was nothing but a sandbar covered with driftwood and scrub volunteer trees. Benny was a trouble shooter, a gadget maker, a jig builder, a top notch mechanic with lots of know-how."

When Benny Richardson left, someone had to fill his vacant shoes. That someone was George Okeson. Like Richardson, Okeson was involved in nearly everything that went on, including working to expand the buildings. A separate chapter on Everett B. Hill, former Gunderson Electrical and Maintenance Manager, also deals with some of Okeson's exploits. Between them, Richardson and Okeson conjured up dozens of fixtures for holding the work in place; positioning it while it was being worked, welded or fastened; or moving it. They also saw certain hazards in the work place, and made gadgets to prevent accidents.

Another gadgeteer was Louis "Babe" Dillman, born in 1899, and written up in the *Gunner* in June, 1953. He had spent time in his earlier years as a musician on the Canadian Pacific Liner, "Empress", and in the woods as a logger. Probably, his logging experience helped in the design of the Gunderson logging trailers, which were so popular. "Babe" was hired in 1936 at the 14th & Everett shop. He soon moved to the Linnton plant as a welder and in the early 1940's transferred to the Front Avenue plant pipe shop. He maintained all of the oxygen and acetylene lines and acted as fire chief and fire inspector. He originated a steady stream of "gizmos" for making the work safer and faster. For his creations, he pulled his steel and parts out of the scrap pile, added a stick of welding rod and a few bolts and nuts, and stuck them together. Many names of similar innovators are missing in this history. It would take reams to name them and their creations.

Shipwrights and carpenters

The company was blessed with "Boss" carpenters who were the best of their trade, like Charles "Charlie" Wahl. Charlie came aboard in 1942. He had been a ship's carpenter in the days when windjammers plied the North Sea and the Alaska Run. He was born in Sweden, "65 years ago", according to the May, 1953 *Gunner*, "And Wood to Charlie is a material of beauty and utility unmatched by steel or any other metal. He would shape the wood by his own hands."

Whenever Chet wanted a building framed up, or if a jig or launching cradle was needed, Charlie would do it without fanfare and usually with a verbal description. Charlie rattled off his own bill of material without the aid of engineers. He could name the sizes, grades and quantities of wood and timbers that he needed. His structures were built solidly and to last. Charlie headed up 18 carpenters and several of them who learned their skills from him perpetuated his superb craftsmanship after he died. They were Joseph "Big Joe" Huserik, Joe's brother Louie, and Charles "Charlie" Lynn.

Joe Huserik succeeded Wahl as boss carpenter and held the job for 35 years until he retired March 31, 1978. Lynn's woodworking talents are discussed elsewhere in these writings. As mentioned in a profile of Joe Huserik elsewhere in these writings, Joe made a great contrivance, the latching or launching mechanism at the head of Ways #4. He conceived it to hold ships in place on their cradles on the ways during their building and then to release them when they were ready to launch. Another one of Joe's creations was a quick change cribbing device that saved labor and time during the building of six pontoons comprising the Port of Portland dry-dock. This was also covered in the profile of Huserik.

The loftsmen and pattern makers

No shipyard could operate without the loftsmen. Their work had to be precise if the steel parts were to fit correctly with their mating pieces. If not, loss of labor, material and time would occur. They were the ones that proved that fairing and lines of ships were

correct. A loftsman must be skilled in transferring to the wooden templates or patterns what he sees on the drawings so that the builders can have a guide by which to cut out and form the steel parts, and drill or burn the necessary holes and openings in them.

Templates are essentially the same as a pattern a seamstress needs before making a dress or suit. They are the image of a part prior to its being burnt or shaped from a piece of steel plate or structural section or other material. Templates contain hole guides for punch marks which are transferred to the ultimate part for guidance in punching or drilling holes. They may also configure holes for windows, doors, piping or other access. They may have a complex bend such as in the curving bottom of a barge. Bias, bends and shapes are all considered.

When the templates are finished, the layer-outs and duplicators place them onto the steel plates or structurals, and scribe or trace them so that the material may be cut to the exact configuration. On minor drawings the layer-outs transfer the details directly from the drawing to the material without the need for templates.

Records are not available that give the names of successive foremen of the department but they are thought to be Archie Barnett, Elmer Kunnas, Thad Stevens, Harry Choate, Bob Garrett, Jim Kent and Pat Gillenwater. These men and their crews of loftsmen were among the best in Portland during those shipbuilding days.

Mock-ups and models

Loftsmen and carpenters were often asked to build mock-ups of a structure out of plywood and spruce.

Good examples of a mock-up were the bow door for a LCU (Landing Craft, Utility) that Thad Stevens made, and bow doors for an assault boat and an ocean research vessel by Pat Gillenwater. When approved by the Navy and other customers, the models served as a tool for training those who built the actual doors from steel.

The mock-ups were a work of art. Gillenwater, throughout his lofting career at the company, built dozens of "half blocks" (one-half of a barge) and a few full blocks from wood. They were built exactly to scale, a fraction of the barge's actual dimension. Pat recalled, "The purpose of the half blocks was for plating of the hulls, and the purpose of the full blocks was for water drag tests."

The riggers

Rigging of steel is another skill that demands a high degree of knowledge of how to handle, lift and transfer a load of construction material from one location to another. It also requires a familiarity with the strengths of the rigging materials such as cable, grapples, hooks, slings, the strength of the boom, and the power available from the machines doing the lifting. In addition, the shapes, sizes and weights of the material to be rigged all affect the types of equipment needed to move the load.

Joe Gredvig, the granddaddy of Gunderson's riggers hired on at Gunderson in 1942 and, as lead rigger during the forties and fifties, moved mountains of material. His background for rigging began in the Oregon woods in 1934. He moved to the west in the early thirties because of the dry and windy years on a farm in North Dakota where he was born in 1915. Joe and two of his fellow workers died in a tragic gas explosion down in the hull of a Navy LCU in July, 1961, while performing a rigging job. It was an accident that marred the good memories of the company's past history. But Joe will always be remembered for being a man who knew his business of rigging.

Another kind of rigger was cigar-smoking W. E. (Bill) Bonner. In 1944, he worked in the rigging loft splicing loops in the ends of LCM tank lighter's manila rope mooring

lines. The rope was heavy, about 1-1/2" diameter and had several separate strands that had to be spliced. He knew his job well. When asked how he began smoking cigars he said he had been with the Army in the Philippines in 1899. He said he was assigned duty as a driver of a fire engine and when a big Manila cigar factory blazed up one night his rig was the first on the scene. The *Gunner* story featuring him said, "Well one thing led to another and the next thing Bill knew, he had himself a couple of thousand cigars tucked away under the seat. "Been smoking them ever since," he says, "although the original 'stogies' ran out about 1912. Darned tough, having to buy your own."

The File-A-Way parking machine

A most unusual project undertaken by Gunderson between 1955 and 1958 was the File-A-Way parking machine. The File-A-Way wasn't only a machine for parking automobiles, it was also an elevator that could lift them to the upper floors of a parking garage without going straight up. While the elevator was "going up", it went sideways at the same time, heading for a "pigeon hole" for the car.

When a car was parked at File-A-Way, a button was pressed and a small-wheeled carriage with four sets of jaws rolled out of the elevator and positioned itself underneath the front and rear tires of the car. The operator pressed a button and the jaws closed over the tires and lifted the car off the floor onto the carriage. Another button retracted the carriage and car into the elevator. A button activated the transmission of the auto to the desired floor and "pigeon hole".

According to Leighton W. Johnson, "The person who promoted File-A-Way was Allen Bigler. He tried several years ago to get me interested in a File-A-Way parking system for containers. However, Allen could not get enough money to promote or pay for the engineering. The File-A-Way parking machine was the most difficult engineering project I was ever involved in at Gunderson. The first concept Allen brought to us was the one we should have built, but there were patent difficulties which scared off Chet from pursuing it. We were then instructed to pursue Allen's second version. Charles (Chuck) Wingrove spent several months working in Camas with some engineer friends of Allen's on the design and detail drawings.

"When it was finally built and installed in the ten story, quarter-block building on the corner of Southwest 4th and Yamhill in downtown Portland, George Miller was the only person who could keep it running." If George was out of town or on vacation and the machine broke down, Fritz Dummer dropped what he was doing and made the necessary repairs.

Leighton continued, "George and I talked about the problems many times. Today with the sophisticated computer controls and also the miniaturization available, it would have been a much more maintenance-free machine. When George Miller retired, there was no one who knew it like he did to keep it running, so expenses were soon more than income. Today none of the parking machines that I know of are still in use. I believe maintenance expenses as well as operator costs finally caught up with all of them."

George Miller ran the machine for nine years until he retired. There were 250 parking spaces in the building which had been fabricated and erected by Gunderson. He had 200 monthly accounts. To be competitive his parking rates were 30 cents per hour.

Chet Gunderson "Ferris Wheel" parking machine

A "Ferris Wheel" parking venture was considered by Gunderson during the File-A-Way era. Leighton explained its background: "About the time Chet took an interest in

parking machines, he heard about the parking wheel in Jackson, Mississippi. I was sent there to take photos and copy the design. As I recall, it could park about 10 or 12 cars.

"We designed and built one which was tested in the shop during which the accident happened to Bill's nearly new Buick automobile while he was on vacation. (W. E. Bill Love was away on vacation and left his car parked at the plant) They decided to use it in the test. While revolving the parking wheel, Bill's car was tilted out and fell to the ground demolished. When Bill returned the air was blue with his cussing. He wondered why they hadn't bought an old used car for the tests. There should be a picture in some of the old files.

"It (the parking machine) consisted of two plate steel chain sprocket wheels on the bottom and two on top with the car carriers in between the chains." (which ran continuously over the sprockets the same as they do in a Ferris Wheel.) "It was powered with a gear reduction electric motor."

Leighton continued, "Chet was sure that Chevron service stations and others would be interested. When the testing was completed, it was found to work okay but the price was higher than most service stations or their parent oil companies wanted to pay."

Al and Chet's feud goes public

In 1953, the "First Annual Gunderson Service Award" meeting took place at the Aero Club. I was one of the awardees. I received a television set in commemoration of my 25th year of service.

The party broke up after Chet insulted Al about his son, Bobby. Al lost his cool and upset a table covered with dishes of food, glasses of beverages and half-empty wine bottles. It caused a terrible clatter and mess. He stalked out of the meeting in a huff.

Everett Hill remembers the night. He said it kind of put a damper on the party. He and Thad Stevens went out into the street looking for Al to try to cool him down and talk him into coming back to the party.

Al had had a few drinks and was quite upset. He complained to Everett and Thad, "Nobody stood up for Bob." Everett told Al, "Nobody said anything against him either. I would do the same thing too for my boy as you did for yours. You can't expect that gang (at the party) to say anything either, and you might as well calm down and come on back to the meeting."

Everett remembers Al saying to him, "You can be fired too." Everett answered, "It wouldn't be the first time."

Al did come back to the party, but he and Chet weren't speaking.

The next annual award dinner would not take place until 1967.

GB takes to the rails

Two owners make unique management team

Al and Chet Gunderson had unique characteristics. But they had individual personalities. As it worked out, their differences served to complement each other where management of the company was concerned.

It was an unbeatable business management combination.

Outwardly, Chet seemed indifferent to the efforts of the salesman, Al. He concerned himself with the operation of the plant. He paid attention to the men who ran the shop and concerned himself with the facilities and machinery. He didn't seem to worry about

collecting the accounts receivable. He didn't seem interested in the day to day accounting of the business. But, for sure he paid strict attention to the financial statements.

Al, on the other hand, conducted the sales efforts, worried about expenses, salaries, job costs, prompt invoicing of jobs, receivables, payables, and everything connected to Gunderson's relationships with its customers and suppliers. Outwardly, at least, he appeared to have no "savvy" when it came to production, machinery and shop management. At least, he left that up to Chet. But, for sure, he too paid strict attention to the financial statements.

Al was an aggressive salesman. He nurtured his contacts with potential customers. When one of his salesmen could not get a good answer as to the outcome of the bid, Al made a phone call to the customer's president and, quite frequently, sewed up the business.

When one of the brothers was asked a question that was not in his domain, he would say, "You'll have to see my brother about that." They knew the precise line of demarcation between their two authorities.

Chet Gunderson a mechanical wizard

Although Chet Gunderson had no formal engineering training he was a mechanical wizard. He could envision how materials could be moved and handled in the best and safest manner. He could foresee how a building should be built and arranged for maximum efficiency and for future expansion.

He could adapt machines from one prime use to another. In 1956, while anticipating a barge order from Portland Tug & Barge Company, he found and bought a then quite old Manitowac truck crane which had been used in the woods for logging. He had a steel boom and a timber runway built for it then used it to rig steel and materials for the barge construction in Shipways No. 3. That crane more than doubled plant capacity to handle steel sub-sections that had to be hoisted into place during construction.

Never say "no" to an impossible task

Neither Al nor Chet would accept the word, "No", for an answer to a situation of hardship. I wanted to say "no" to a seemingly impossible venture in conjunction with one of the worst steel shortages in our company's history.

In 1956, the economy turned upward for a while and Gunderson's backlog became quite heavy, but so did everyone else's. Gunderson, not being among the heavyweight steel consumers, was hard pressed to get enough steel on time to perform the work it had on hand.

Al saw what had to be done

Al recognized my plight of not being able to secure enough steel on time to perform the work we had on hand, because even he could not convince our normal, most economical suppliers to give us the needed allocations. He was in a quandary and I wondered about my own ability to produce.

With much inward reservation and doubt, I suggested that we might have to go elsewhere to get our steel. With that, he said to me, "Benny, I want you to take an airplane to the east and contact every steel mill you can and buy whatever steel you can to make up our shortage. And we don't have much time. It's worth a try. We will have severe penalties to pay if we can't get enough steel on time. We'll lose our shirt if we have to make up that deficiency with expensive, locally stocked warehouse steel, besides

they (the warehouses) don't carry the proper sizes we need and we'd have too much extra expense to weld their stock sizes together."

Contacted Eastern steel mills

Fearing failure right from the beginning, I nevertheless went ahead with reservations at hotels in Chicago, Illinois; Youngstown and Cleveland, Ohio; Bethlehem, Conshohocken, Coatesville and Pittsburgh in Pennsylvania; and Claymont, Delaware. There were steel mills in all of these cities.

I also asked if I could sight-see in New York over one of the weekends during the trip. To my surprise and delight, Al didn't say "no" to my request. He even suggested I stay at the Waldorf-Astoria Hotel. He told me to figure my expense account so that it would not cost me any money out of pocket. When I found that I could squeeze that out of him, I knew I could accomplish anything.

I flew to one town, rented taxicabs and contacted the mills, then flew to the next town the same evening. The trip covered two full weeks.

Successful steel purchases

As a result of the trip, I secured steel from four of the several mill sources I contacted. They were, Alan Wood Steel Company in Conshohocken, Lukens Steel Company in Coatesville, Youngstown Steel Company in Youngstown and the Inland Steel Company in Chicago.

While the steel wasn't as cheap as that we could buy from our closer, more economical sources with much cheaper freight costs, it was still cheaper than warehouse price and came in better sizes.

Steel floor plate right for the job

A large project which benefited from the Alan Wood steel was the Wahluke Siphon pipeline completed in 1958. The steel from that supplier was diamond-patterned floor plate. The steel floor plate had raised diamond patterns on one of its two sides. The purpose of the raised pattern was to provide a non-slip characteristic when walked or worked upon. It proved highly satisfactory because Warren Howe, Project Manager, had those plates rolled into pipe with the diamond pattern on the outside surface of the pipe. The pipe was encased in concrete anyway so the non-slip surface held even better in its casing.

Squeaky wheel gets the grease

Once again, Gunderson Can-Do was demonstrated. As Al had often told me, "The squeaky wheel gets the grease," and it did. Furthermore, Gunderson's normal steel sources treated us better after that, resulting in Gunderson's being much more competitive."

Steel fabricating field crowds up – railcar work assessed

In about 1957, the "handwriting on the wall" clearly indicated that too many other steel fabricators were entering the arena in addition to the already heavy competition from "big steel" owned subsidiaries such as U.S. Steel's American Bridge Company, Bethlehem Steel fabricators, Chicago Bridge & Iron, and others.

Business got so bad that Al and Chet Gunderson began to talk about having to lay off a lot of people and take their salaries from the Eugene Hotel because Front Avenue was not making money.

First bid on railcar underframes

It was during this period that Gunderson decided to move into railcar underframe fabrication and leave the bridges and buildings to others. They had received several requests to bid on the frames but had shunned the business because, previously, they had been so tied up with other structural steel work.

Quicker and better profits in underframes

The brothers reasoned that they could achieve a much shorter product turnover because the underframes would be produced rapidly and shipped and paid for quickly as they were completed. As opposed to the lengthy time-consuming building process of a bridge or building. It was sometimes months before the money could be collected on a bridge or building job.

Another advantage was sales volume. The large quantity of underframes being used by the railroads meant bigger revenue, much more than could be made in bridges and buildings in a similar time frame.

Reduced freight rates on underframes

Carl Evers, District General Traffic Manager for Union Pacific Railroad, and Al Gunderson were close friends. Both wanted to see the underframe work brought to Portland. To Evers, it meant many more thousands of tons of steel shipped over his railroad into his sales territory. To Al it meant his company's survival from the famine of steel work during that time of over-supply, when too may fabricators were scrapping over the same piece of business.

Pacific Fruit Express Company (PFE), who built and owned its own fleet of refrigerated boxcars, was owned jointly by Union Pacific and Southern Pacific railroads. PFE built the refrigerated cars in its Colton and Roseville, California shops. However, their shops were not suited to build the underframes for these cars. They sub-contracted the frames to steel fabricators.

PFE had bought hundreds of underframes form Consolidated Western, a U.S. Steel Corp. subsidiary doing business in Richmond, California. Pacific Car & Foundry Co. in Seattle, Washington had also looked at building the frames but they were busy building complete railroad refrigerator cars and cabooses for other railroads in Seattle.

Consolidated Western had a big freight advantage over Gunderson because they were practically next door to the PFE operation.

Fabrication-in-transit is key to Gunderson's success

It was then that Evers, a razor-sharp freight rate technician, suggested to Gunderson the idea that would overcome Consolidated Western's freight advantage. His idea was for Gunderson to make an application to the railroads to include "Underframes, railcar", in the list of fabricated iron and steel products which could be fabricated-in-transit (F.I.T.) under the existing freight rate tariffs. This meant that instead of Gunderson paying a station-to-station rate of almost $25 per ton for a 14-ton underframe from Portland to Colton or Roseville, they could ship it under F.I.T for only about $1 per ton.

This fabricating-in-transit privilege permitted a steel fabricator to ship his steel by rail from his steel mill source into his plant, fabricate it and re-ship it to his customer for incorporation into the final product, for example, a bridge, building or dam gate. Under F.I.T. there was only a slight extra charge or "penalty" above the original cost of inbound freight for using this privilege, but it was very small compared to the overall, station-to-station freight rate which Gunderson would otherwise had to use in calculating their bids.

Years before, Gunderson had secured this right when it began fabricating steel for bridges, buildings and tanks.

Now all they had to do was ask the railroads to include "underframes, railcar" in the F.I.T. In this new case "station-to-station" would mean, Chicago or Pittsburgh and other Eastern points to Colton or Roseville, California via Gunderson in Portland, Oregon. In essence, the only difference in freight costs between Gunderson and Consolidated Western would become this small $1 per ton F.I.T. penalty. This small charge could be overcome by a savings somewhere in the fabrication costs.

Freight rates for iron and steel from steel mills in the East to Portland, Oregon or to points in California were almost identical. And – PFE's parents, Union Pacific and Southern Pacific had the right to bring the steel westward by way of Portland.

The main restriction in the tariff was that the fabricated product could not be a complete re-sellable item (a whole bridge, building or freight car with all machinery and moving parts), and that further work and material had to be added by its owner before it was put to use or went to market. Another restriction was that no back-haul was permitted, or in other words, the fabricated steel could not be shipped back up the tracks toward Chicago or Pittsburgh. It could only go further down the line from those points.

In this new case, it could be an underframe which was not a complete product in its own right, but a part of a final product, a railroad car. The tariff did not, at the time, include underframes.

Railroads wanted more inbound freight plus another source

The two railroad parents of the PFE were quick to add underframes to the tariff because it meant that PFE could inject more competition into their frame purchases. In a sense, they were "captive" to Consolidated Western. With competition, Consolidated would have to sharpen its prices.

All of the Eastern and Midwestern railroads participating in the inbound haul (and who also had to approve Gunderson's application) were quick to approve the tariff change. Another important consideration was that the two railroad parents would get a longer freight haul and, consequently, more freight revenue.

Immediately, Gunderson's delivered price was competitive, and they were in the business of making underframes, eventually 2,000 for PFE and 150 for Southern Pacific Company between 1957 and 1959.

Ray H. Kinchloe was shipping manager at the time, having taken over for Ernie Pautz, who had passed away.

The F.I.T. privilege

Ray had become Gunderson's authority on F.I.T. The process involved keeping strict records on inbound steel and recording each inbound freight bill with the freight bureau, much the same as one would deposit money into a checking account. When a shipment of underframes was made, enough inbound freight credits, recorded previously, were surrendered to cover the weight of the underframes. This was akin to writing a check against one's account and when it cleared, his balance was reduced by the amount of the check.

Kinchloe arranged with the Southern Pacific to secure the proper cars, called for a railroad inspector when the loaded cars were ready to be pulled, and notified the railroad to pull them.

There were times during those busy years that so many carloads were coming in and going out that it was not possible to unload the incoming cars within the legal time limit.

Without precise and careful supervision, the demurrage (legal penalty for detaining a railcar too long) would rise to staggering amounts. Kinchloe maintained precise records and held these demurrage charges to a bare minimum.

First order for underframes

The first order of 150 underframes was from Southern Pacific Company. They were 89 foot frames for the first Piggy-back railcars.

Southern Pacific assigned several flat cars for Gunderson's exclusive use in hauling their underframes and those of PFE. The cars for the PFE frames were specially fitted to carry seven underframes weighing seven tons each.

Union Pacific participated in the inbound haul of steel to Gunderson's plant.

Howe's version of Gunderson entry into railcar work

Warren L. Howe, Jr., Contract Manager for Gunderson at the time wrote his account of that period and it follows:

Jobs mostly one of a kind with hectic schedule

"The Gunderson sales and contracting section was always on the lookout for jobs to bid on that were within its capabilities and that promised the opportunity for a profit.

"We constantly sought plans to bid and there was a constant flow of plans and requests for bids, arriving by mail. Each job we reviewed with the above goals in mind. In our judgment maybe only one out of four projects met this criteria.

"The jobs that appealed to us most were marine type jobs such as barges and tugs, water tanks and large diameter pipe, bridges, structural steel frames for buildings and gates for dams. These we had been successful and profitable on.

"These jobs were one time jobs and often were frantic from beginning to end. By frantic, we mean getting the material ordered, preparing detail plans, scheduling through the plant, writing specifications and arranging a multitude of details. We were delighted when we won a job. The next daylight was only when we completed it. When we all collapsed in relief. But by this time we were into another project.

"The hectic lifestyle was nerve wracking for everyone in the organization.

Al Gunderson wished for a mass produced product

"Often Al Gunderson, Vice President, used to say that he wished we could get into a manufactured product to eliminate some of the nerve-wracking hassle. Little did he know that the first part of his wish would come true.

"There came a period in the late fifties when there were becoming fewer projects to bid on. Work was slowing down in the plant. Dangerously so.

"At one point Al Gunderson called some of us into his office. They were Benny Lundquist, Purchasing Agent; Leighton Johnson, Chief Engineer; Charlie Hawkins, Controller; Nick Thomas, General Superintendent; and Warren Howe, Contracting Manager. Gunderson said that if business were to continue down hill we'd have to close the plant. He said that we who were in the room would remain on the payroll while attempting to get more business. He said he and Chet Gunderson, his brother and President of the company, would take their salaries out of the Eugene Hotel, which they also owned.

"The flow of plans and requests for bids had slowed down to a trickle. We began to look each request over more carefully.

We had passed on railcar bids thinking we had no chance

"Through the years we had received plans and requests for bids on railroad cars from Southern Pacific Railroad Co. We paid little attention to them because we knew there were companies who specialized in this type of work such as Pacific Car and Foundry in Seattle and Consolidated Western in Richmond, California. We wouldn't have a chance.

"But there came a point where the only thing to bid on was an order for 150 car frames for Southern Pacific. For lack of something better to bid on we half-heartedly went through the usual routine of taking off the material, submitting the material lists to purchasing for prices, figuring labor, and all the other factors, such as freight, overhead, etc. We submitted a bid. Lo and behold we were low bidder! And substantially low!

"As soon as we heard this we quickly reviewed the plans and our competitor's to see where we had made a mistake. All was in order.

"Southern Pacific wondered if our figures were correct. They told us that they were reluctant to give us the job at that quotation. But they said a similar project was now under way at Consolidated Western in Richmond, California. If we wanted to go down and look at the work we could then decide whether we wanted to accept the job or not.

Thomas finds job will be a breeze

"Nick Thomas, General Superintendent, and one of his assistants went to Consolidated's plant and looked over car frames in fabrication.

"Nick returned to Portland in glee. He knew that the car frames could be easily built for what we had quoted and he saw ways to improve our position by production methods. One that stands out is the coupling (housing) at each end of the frame. This box-like fixture could be made with one piece of steel, formed in a press, and only one corner welded. Fantastic savings.

Underframe job a success

"Gunderson built the 150 frames and made a substantial profit. But before the order was completed Southern Pacific had already expressed their pleasure at the product they were receiving and increased the order to 1,000 car frames. Before this order was completed more than 2,000 car frames were built for Southern Pacific. (Actually the 2,000 frames were for the PFE, jointly owned by Southern Pacific and Union Pacific)

Al Gunderson realizes his wish

"Al Gunderson's wish had come true. Gunderson Bros. Engineering Corp. was now in the mass production business.

"After the initial 150 car order the Sales and Contracting section dropped out of the bidding on future orders. By this time the Engineering Department (Leighton W. Johnson) and Al Gunderson's connection with Southern Pacific and Union Pacific's officials were in high gear."

Meanwhile, Warren Howe and his contracting section continued to sell increasingly larger projects in marine and steel fabrication.

Dimensionally, the largest, single structure ever built by Gunderson, and sold by Howe, was the Port of Portland's 25,000 ton floating dry-dock which is described elsewhere in this history. Finished in 1963 under Howe's guidance and control, this project was very successful, and as a result, Gunderson's image as a shipyard of quality and integrity was enhanced. But Warren would not overlook the little "Can-Do" projects for which Gunderson also became well known.

Footnote:

Billy Love's tank jobs were complex. They often involved exotic steels, very high working pressures, and were built to contain toxic liquids. Helen Love, Billy's wife, told me that Billy earned his Engineering Degree by attending night school while he worked. He passed the State Board Examination in 1935. She said that when he was at American Pipe & Construction co. in the late '30's, his company, like Gunderson, was having a tough time staying afloat. They could only pay Billy $75 a month, but he and several associates held the company together until good times came again.

Chapter 10

Those first gondolas

Many different inspections

Dealing with the railroads was much different than dealing with barge customers. Owner's specifications, of course, were common to both. In railcar work each railroad normally had its own inspection agency or used its own employees whereas in marine work the customers almost always used the American Bureau of Shipping and the U. S. Coast Guard.

Inspectors for each industry would inspect throughout the course of the work.

Railcars were built to established rules set up by the Association of American Railroads (AAR). Manufacturers of freight car components such as hand brakes, couplers and draft gears, had to secure pre-approval of these parts from the AAR. Once that was done there was no further inspection of those parts except for a cursory look by the railroad's inspector for surface defects or ineffective operation of the parts. The AAR and the Federal Railway Board lay down certain rules and these must be followed in carbuilding.

For marine jobs the yard secured the material without interference or influence from the customer except for certain brand preferences. But railroad purchasing agents sought out their own prices for parts for their cars, a duplicate effort to that of the builder. They further insisted that all freight, going into the builder's shop for their car construction, was routed over their railroads. Failing in that, it was routed over a railroad who could later reciprocate an equal haul.

Railroads controlled materials

When the railroad bought cars, it would require the carbuilder's sales department to submit a list of its suppliers' specialty prices–wheels, axles, etc, so it could compare the list with its own to assure itself that it was getting the lowest price and still deal with its better freight customers.

The first Southern Pacific order for 89 foot underframes in 1958, for the new piggy back auto-carrying cars, the longest freight cars ever built, had required 3,000 tons of steel beams which were obtainable only from Bethlehem Steel Corp. in Bethlehem, PA. In order to bring them in at the cheapest delivered price Gunderson had them shipped ocean freight. This being Gunderson's first order from Southern Pacific for frames, inadvertently, the buyer had not noticed a contract clause stipulating railroad control of inbound material. When V. C. "Vern" Hedding, the railroad's purchasing agent, did a post-audit of Gunderson's invoices (among other things, to ensure conformance to the inbound routing requirement), he uncovered the error and demanded reimbursement for the lost freight revenue. Gunderson received a scalding seminar on the purchasing of materials for railroad cars. From that point all railroad purchase order clauses were obeyed religiously. Fortunately, Al Gunderson forgave his buyer knowing that the matter was an oversight and that, in the end, there was no way to avoid paying the higher freight anyway.

Thereafter, Gunderson's sales manager and purchasing agent were directed to meet with Hedding and his assistants to "settle the specialties". All parts would be tabulated showing prices and sources. The format which they prescribed was known as "Exhibit A". During the meeting Hedding would lead the Gunderson group through each item and would compare their cost with that of Gunderson. Quite frequently his price would be

cheaper than Gunderson's and he would direct Gunderson to go back to its supplier and tell him that if he wanted the business he would have to meet the price. In essence it boiled down to "making an offer to buy" rather than accepting someone's quote. The practice was frustrating but yet it was characteristic to the railcar business.

Hedding was always fair. One time Gunderson left a sizable specialty out of their bid costs. He could have forced them to build the cars, because they had accepted his railroad's purchase order. But, with a stern warning and a promise that a precedent was not being set, he allowed them an extra to the price to cover the omission.

A similar omission was allowed on a job for Northern Pacific Railroad, but from that point on, a check list was developed to ensure that all parts were included in the bid.

Underframe work ends

After having produced 2,000 underframes for Pacific Fruit Express and 150 for Southern Pacific for the car shops in California, the two parent companies found that, due to high labor costs and other factors, it was no longer feasible for them to produce their own railcars and they served notice on Gunderson that no further inquiries for underframes were forthcoming. Once again Gunderson found itself facing a lack of work for its structural shops. The marine business was going fairly well, but the big fabricating plant would face a lay-off of many good people and the Gunderson brothers hated to see that.

While finishing the last of the underframes, Al and Chet were discussing the future with a group of their key managers with a view toward finding a way to keep the company operating. All of the other businesses the company had attempted up to that time were either depressed or over-supplied by competitors. It was a "dog-eat-dog" situation.

Out of that discussion a unanimous decision was made–the Gunderson managers knew the company was good at making the toughest part of a railcar, the underframe. Their welding ranked among the best in the steel industry. Their facilities, though ample for underframe work, would be small to begin with but could be expanded in proportion to the size of orders received. The decision was that Gunderson would add its name to the list of railcarbuilders in the nation; and to begin soliciting the railroads for freight car orders. They could still go after structural work and tank jobs to keep the plant running until they landed some railcar work. The marine work would now help in a big way.

Bidding a whole railcar

In 1958, Gunderson began bidding on complete rail freight cars. The first several bids were for refrigerator cars which Pacific Fruit Express had been building in California. Then there were several bids on caboose car inquiries. Most of the bids originated from Southern Pacific and Union Pacific. But the railroads continued to advise that Gunderson's bids were too high. A competitor in Renton, Washington, Pacific Car & Foundry Co. was consistently outbidding Gunderson on these cars and getting the lion's share of that business. Even by negotiating with the railroads when they offered business, Gunderson could not get its prices down enough. Finally after about a year of futile bidding, Gunderson began to receive inquiries from the two railroads for coal and sugar beet cars, flat cars and box cars.

GB breaks into carbuilding

Finally, in 1960, Gunderson was the successful bidder on 200 70-ton capacity coal gondola cars with corrugated steel sides and ends and corrugated steel, hinged, drop

doors on the bottom of the cars. The doors were hinged from each side of the car and were opened and closed with a hand ratchet which operated the continuous hinge on which the doors were mounted. The corrugated doors, sides and ends at the time, were produced by Standard Railway & Equipment Co. (Stanray) of Hammond, Indiana under the trade name "Dreadnaught" design. Except for a refrigerator car, it was one of the most difficult cars to build.

Rumors were rampant throughout the railroad fraternity that Gunderson had bit off more than it could chew–that of all cars to stay away from when entering this new field, it was a drop bottom "gon". Nevertheless, Gunderson went blithely ahead, highly concerned. Caution was the watch word and "Can Do" was the motivator.

The news about the order spread rapidly throughout the rail industry. Overnight Gunderson was swamped with salesmen of car parts and steel.

Freight costs for each car's worth of materials were about $2,500. Several parts were of a nature on which substantial reductions could be made.

In addition to some other freight savings, Gunderson decided to tackle one of the major weight components, the corrugated drop bottom doors.

Cheap door press

To lower labor costs for the doors, it was decided that a special press had to be built for corrugating the drop-bottom doors. John Hohler, W. E. "Billy" Love and Leighton W. Johnson were assigned by the brothers to find a press and, if necessary, modify it to do the job. They found a 1000 ton capacity used press and asked for it to be bought. When it came in, they re-powered it with a new hydraulic system and upgraded the press to 1500 ton capacity. The "new" steel columns which served as rails for its platen were old, surplus ship shafts from Zidell's scrap yard. These were turned to the correct diameter in Fritz Dummer's machine shop. The dies for corrugating the metal were made in-house as well.

What a marvelous machine that press was, literally built from the scrap heap–an example of the engineering know-how of Johnny, Leighton and Billy.

During the construction, Chet Gunderson received a telephone call from Henry Correa, the President of ACF Industries, one of the largest competitors, asking if he could come visit the Gunderson operations. (To see what that young upstart of a carbuilder was up to and to assess the impact of this new competitor upon ACF's future.) Chet agreed on the condition that he could visit the ACF plant in return. When Correa saw the press he asked Chet where he got it and how much it had cost. Chet told him that it had been resurrected from the scrap heap and the total cost was about $15,000. Correa exclaimed, "Hell, some heads are going to fall. We just paid $125,000 for the same thing new!" It took a year to deliver the 200 gondolas.

Buying a railroad scale

Gunderson soon found that they needed a railroad scale in the plant. They had been switching the new cars to the Northern Pacific Terminal Co. where there was a scale. The cars were ready to go except for the last few digits of the weight which had to be stenciled on by the painters before the car could be considered delivered.

A new scale would cost many thousands. But a friend of Gunderson's who had been doing a lot of track work for them, A. D. "Jack" Ford, became aware of the problem; and told them of a railroad scale that was available at Fort Stevens near Warrenton on the northwest coast of Oregon. He noticed that the U. S. Army was going to dispose of the scale to the highest bidder. Gunderson's buyer got into Ford's pickup and the two of them

drove to the army base to inspect the scale. It was a pile of rusty bolts, castings, parts and springs. It was a pile of scrap.

Jack assured Gunderson's buyer that it was, in fact, a railroad scale and a good one. He promised that he could put it all back together again.

He suggested figuring out what a scrap dealer might bid then adding $500 to that, and he was certain that such a price would win the bid. He even guessed the weight of scrap in the pile. The bid was $1,400, just $200 higher than the dealer's bid and the scale was purchased.

Part of Ford's motive wasn't just being a good neighbor, but he knew he would have another job putting in the scale. He was promised that. So Ford got the job to dig a pit, pour concrete foundations and walls, reassemble, install and test the scale. Everything went together and Gunderson had a scale for under $12,000.

The scale served faithfully until the '70's when the weighing operation was relocated. A new scale was bought at several times the price of the old one. Then the old one was sold for scrap and much of the original investment recouped because the price of scrap had increased substantially by then.

On entering the railcarbuilding business Gunderson had to buy quite a lot of machinery. Hundreds of welding machines and metalworking machines were bought. Again, much of it was used. Two 1920's vintage Niles freight car wheel boring mills were bought for $2400 for boring the freight car wheels. Then a wheel mounting and bearing mounting press were home-made so that Gunderson could mount wheels and bearings on the car axles instead of subcontracting that function. Later on, the mills would be joined by two more old junkers so as to increase production. They served their purpose reliably until the Association of American Railroads (AAR) inspectors complained that they no longer machined to accurate standards. Then they were replaced with one new Farrel-Birmingham automated wheel boring mill costing $1 million.

Meanwhile in 1958, "Wheel & Rim Service Inc." changed its name to "Gunderson Bros. Investment, Inc."

New orders booked after "wait and see" period

After successfully completing the Gondolas and making a small profit and after a "wait and see" period by the railroads–no cars were produced by Gunderson in 1962–Southern Pacific Company gave the company an order for 400 70-ton capacity flat cars which were delivered in 1963. Next was Union Pacific's order for 300 40-ton capacity triple decker stock cars for sheep and hogs; the cars were used on a run from the intermountain area to Los Angeles. These were delivered in 1964. Gunderson was off and running and each year they received larger orders and expanded the car lines until eventually in 1979 the year's output was 6,027!

As each new railcar order came in, the manufacturing facilities were lengthened, and the car line straightened out for greater efficiency. That first order for gondolas had been built in confined quarters with room for only a few car-lengths in one bay. When the car was completed it was hoisted in the air and carried to a rail spur which intersected the production line. All work stopped until the car was out of the way then the ensuing cars proceeded to their next station. A portable railroad cross-over was built so that the cars could roll down the short line as they were built. The crossover was removed at night so that the new cars could be delivered to the railroad spur across Front Avenue.

As the bays were extended and car lines stretched out to the end of the bays, a better way of getting the cars out of the plant had to be found. "Rube" Nelson, a former plant superintendent from the Pacific Fruit Express shops, got the idea of a transfer table on

rails which would roll sideways between the car line in Bay I to the car line in Bay II. The cars would roll out of bay one onto the transfer table, then would be moved to bay two and shunted back up the line there. It was called "The Gunderson Railway–shortest in the world, goes nowhere–only sideways."

Gunderson pioneered innovations

Gunderson pioneered many innovations in car construction. Until the time they began building railcars, the steel in them was fastened together by rivets. It has been reported that the Union Pacific Gondolas built by Gunderson were the first all-riveted railcars built west of the Mississippi by a private company. That assumption was incorrect. In the City of Portland, 1920 directory, Pacific Car & Foundry Co. of Seattle advertised their car shops in Seattle, where they built railway cars with log bunks for hauling logs from the forests to the lumber mills. Their caption read, "Builders of Standard Railway Equipment, refrigerator and dump cars, all-steel logging trucks, and skeleton logging cars." They were riveted and bolted cars.

The riveting process involved four men each time a rivet was installed; one who watched the rivet-heating furnace and, with special tongs, picked up a red-hot rivet and tossed it to a second man who would catch it in a conical shaped, funnel-like steel can. He poured the rivet on the floor where another man, with tongs, picked up the rivet and inserted it into a rivet hole and, with a pneumatic rivet gun, hammer-compressed the rivet into its hole in the steel car structure. Still another man with a back-up tool on the opposite side of the hole applied opposing pressure on the rivet ensuring a tight fit. The men worked rapidly. It was an intriguing process to watch. But this was not only a tedious process, it was hazardous to the people involved and those working around them.

Finally, after several convincing tests and much effort by Gunderson's engineers, sales people and top management, one rail customer permitted them to weld side posts to the car sides and to weld other parts of the car rather than rivet them. The process resulted in a considerable savings in weight (it took less steel) and labor. Some castings still had to be riveted to the underframes but most of the riveting operation was eliminated. The welded cars passed their trial periods and Gunderson passed another milestone in promoting a safer work place, reducing costs and becoming more competitive in the market place.

They were constantly searching for other ways to reduce freight costs; and to put an end to disruptive freight damages on their in-bound materials. The one-piece roof shipments would vibrate and crack the steel. The freight car axles shipped in pallets would shift in transit and the machined surfaces would be damaged needing repair or replacement of the entire axle. One by one, more components were made in-house, reducing costs continually.

The woodchip cars

The first several hundred cars for hauling wood chips had sides and ends of 3/4 inch waterproof plywood sheathing. The plywood was fastened to the steel framing by welding studs and bolts. The studs were like nails with a large head but they were inserted in pre-drilled holes in the plywood then electrically energized by a hand-held device which sent a current through the stud into the steel frame, fusing the stud to the steel and holding the plywood in place.

The use of plywood and other types of wood or lumber was mandated by the western railroads for their chip cars and other cars wherever possible. The railroads received enormous amounts of traffic revenue from the lumber mills in Oregon, Washington and

California and these mills played their traffic leverage to the hilt; demanding that their products be used in car construction wherever possible.

But steel companies also shipped large amounts of steel over the railroads–especially to Gunderson because about 20 tons of steel went into every car. Competition was very keen on the wood chip cars and, if Gunderson was to compete, a less expensive design of car was necessary. Thus the all steel wood chip car was designed and built in 1966. It was not only less expensive to build but it was also cheaper to maintain. The railroads liked the car and not too many plywood sheathed cars were built after that.

The copper concentrate cars

In 1964, more orders came in from Southern Pacific. Western Pacific Co. ordered 70 flat cars in three varieties - bulkhead, general service and farm implement. Then Denver Rio Grande & Western ordered ten 100 ton capacity covered gondolas. Gunderson's car operation was now full fledged and under way.

In 1964 and 1965, Gunderson won a bid on 24 copper concentrate cars for the Southern Pacific. The Santa Fe railroad joined Gunderson's customer list when they ordered 25 of the copper cars. The copper concentrate car was a true hopper car with air operated clam shell doors running lengthwise of the car. The car was 100 ton capacity but was much shorter than the box and chip cars being built at the time. 100 tons of copper concentrate mud didn't need the volume of space that the same weight in wood chips would (60 foot car). When the clam shell doors on the bottom of the cars were opened, the concentrate would plop out of the car with a "whump". This car was designed and formally built by the Baldwin-Lima-Hamilton Corporation until they discontinued manufacturing them. They were paid royalty on every car built by Gunderson, its sole licensee for the cars. They sent Gunderson the patterns for the steel castings such as cylinder heads, hinge castings, strikers and center fillers. These patterns had seen better days so there was a hassle with the Baldwin people over the repair of them but Gunderson got nowhere with them.

The Baldwin representative, William "Bill" Kirkland, was a dyed-in-the-wool railroad man. He was an expert, engineering authority on Baldwin locomotives–even the first ones built in the 1800's. Even though meetings between him and the Gunderson buyer were often heated and contentious, they were memorable. He never pulled a punch no matter how caustic it sounded. He once wrote a scathing letter acknowledging a purchase order to his company. The order contained some amateurish legalese which the buyer had inserted into the order to protect the company against some contingencies that could happen. Years later, on his retirement, correspondence from him gives an insight of that unforgettable man:

"I am glad to see that you have not forgotten your lineage and still refer to the plant as 'Gunderson's'. For the same reason, I always referred to our company as Baldwin, I could never enjoy Baldwin-Lima-Hamilton and the subsidiary connotations of Armour & Company or Greyhound Corporation. I always admired Al Gunderson for his part in having put the show together and making it sufficiently a success to have FMC interested in acquiring it.

"Regarding your comments about my coming directly to the point rather than beating around the bush, I always felt I was hired by my company to stand up for their best interests, whether I won any popularity contests or not in doing so. At the same time, I always respected the man on the other side of the desk for doing the same as long as both of us were honest with each other. This style appears to be going out of favor. From what

I can see, it has become more popular to beat around the bush and never square up to the issue.

"I am glad that the problems at Gunderson's is now one of too many cars for too small a shop. You are surely in trouble when it is in reverse. Your letter sounds to me as though you might have paved over Bill Galbraith's shipyard, held an auction on the world's biggest Whirley crane and used the proceeds to construct shop #2 on the site."

When Bill Kirkland retired, Gunderson people were sorry that they could no longer be exposed to his caustic and genuine wit.

Wide variety of railcar jobs

In 1965, Gunderson received an order from the Alaska Railroad for bulkhead and plain flat cars.

For the remainder of the decade Gunderson had a wide variety of car jobs mainly consisting of box, wood chip and gondola cars. In 1965, they experimented with a tank type car for carrying 5,000 cubic feet of flour, its name was Dynabulk. This was essentially a tank car with a large air bag inside of it. In 1967, they built another Dynabulk car and in 1968, one more for dry cement. Then they built 18 more in 1968-1969. There were problems with payments and with quality for the cars so they were discontinued.

— GB Becomes A Heavyweight —

Chapter 11

Floating football fields

While Gunderson was building its reputation as a marine yard and as a structural steel and tank shop during the fifties, the nature of its business was changing. Demand increased for some lines but dropped away completely in others. The company managed to stay solvent.

79 barges built in decade of 1950's

A total of 79 barges were delivered between 1950 and 1959. Most of these, 65 to be exact, of various designs were for the U.S. Navy. All but two of the navy's hulls were 120 feet long.

Gunderson's ambitions to expand to larger vessels began with construction of three 175-foot pineapple and sugar barges built during 1951-52 for Young Brothers and Oahu Railway & Land Co. of Hawaii; a 264-foot barge, the MT. HOOD, for Portland Tug & Barge Company in 1957; and the first barge for Puget Sound Tug & Barge, the ANCHORAGE, a 272-foot hull, delivered in April, 1959.

The pineapple barges are covered previously in chapter 9, "Period of trial and error".

The MT. HOOD went into the bulk cement hauling service from Seattle to Seward and Anchorage, Alaska. She had five large steel rolling hatches which were rolled back to open her cargo hold. A dragline bucket was installed to pull the dry cement from the bow to the stern where a pump picked it up and transferred it to shore. A small bulldozer was kept aboard to clean up the cement that the bucket couldn't reach. She was the first barge off Ways No. 2, according to Ray Thomas, Marine Superintendent at the time.

The ANCHORAGE was the largest barge to date. Her price tag was just over $415,322.

222 powered vessels built in decade of 1950's

Powered vessels for the same period totaled 222. Again, the U.S. Navy was the biggest customer. They bought 200 LCM's, (Landing craft, mechanized) and one 110-foot tugboat.

In 1954, the Bureau of Reclamation bought the tug HAVASU, a 60-foot dredge tender which was delivered to Needles, California for work on the Colorado River. The tug was sent there in three pieces–two halves of its hull and its deck house. George Miller, Mechanical Foreman at the time, accompanied the vessel to Needles to supervise its re-erection. The vessel's pieces were bolted and welded back together then hoisted into the river in one piece.

Everything went off without a hitch according to George, but when hoisting the hull into the water, he had some anxious moments when a derrick crane almost exceeded its capacity. During George's time there, the heat was searing. On many occasions it was more than 110 degrees. Steel absorbs heat readily–eggs could fry on it, according to George.

The Salt Lake Flotilla

Morrison Knudsen purchased six 60-foot tugs in 1956 and two 54-foot tugs in 1957. These tugs were built with special, rust-resistant steel. Their propellers and shafting were stainless steel to inhibit salt water corrosion. They were equipped with cathodic salt water protection, a system that shunts electrolytic action into expendable anodes rather than eating away the hull steel and propellers. Like the Needles job, these hulls were erected at the yard, then disassembled into two halves and a deck house, and shipped on flatcars to the Great Salt Lake in Utah. Once there, they were re-constructed on cradles mounted on freight car trucks and launched into the lake by rolling the trucks down a sloping railway. Their job, in the lake, was towing barges in a railroad relocation project.

After the Salt Lake project was completed in 1961, Gunderson men went to the project, "sliced two of the tugs down the middle like a melon," then shipped them back to the Portland shipyard by rail. Back at Portland, they added four feet in the middle of each, reassembled them and installed a high bridge on them. The converted tugs went to J. R. McDermott for service in Alaska.

The Neptune, the Western Star and the mini-tugs

The 100-foot Tug NEPTUNE was built in 1956 for Puget Sound Tug & Barge Company of Seattle, Washington (now a Crowley subsidiary.) The owner of the NEPTUNE described her duties: "She is designed for anything and everything in the way of tug boat work. She is an excellent example of the boat builders craft employed by Gunderson from her steel hull to her mahogany lined deckhouse."

The 78-foot tugboat, WESTERN STAR, was delivered to Western Transportation Company in 1957. During 1958, a 64 foot pilot boat was made for the Columbia Bar Pilots of Astoria Oregon. The remainder of the powered boats built in the fifties were small pond boats and dredge tenders for local customers.

One of those pond boats, a 17 foot "mini tug", thought to have been made in 1954, was returned because the customer couldn't pay for her. Somehow she got the name, L'IL TOOT, and she has distinguished herself as the "workingest" work boat in Gunderson's fleet of one ship. (See chapter 13, "L'IL TOOT")

Barges balloon in bulk

In 1959, Gunderson's marine backlog escalated. The size of the barges and ships became larger and longer. The ANCHORAGE, already mentioned, was the first of many barge orders from Puget Sound Tug & Barge Co., its sister company and its later parent, Crowley Maritime Corporation of San Francisco. Through 1984, when barges were last built at Gunderson, the Crowley companies had bought 26.

Umpqua orders first of many

In 1960, the Umpqua River Navigation Company, ordered the first of several barges from Gunderson, a 224-foot gravel barge, UMPQUA NO. 1.

Between 1960 and 1970, they bought 13 barges. Nine of them were for gravel hauling, two were crane barges and two were dump scows. The scows are covered elsewhere in these writings.

The first Gunderson marine craft exceeding 300 feet in length was the FLIP, built 1962 for Scripps Institute of Oceanography, University of California at San Diego, California. 355 feet in length, she is described later.

The keys to repeat barge orders

The main keys to Gunderson's success in barge building were: (1) accurate estimating and engineering, (2) securing of materials precisely as needed, (3) high quality construction with very little re-work, (4) a superb, dependable and skilled work force, (5) precision scheduling, i.e. making deliveries as promised. This contributed greatly to repeat orders. In many cases orders were negotiated with customers without the need to competitively bid.

An example of this was the construction, in late 1969, of a 150 foot wood chip hauling barge for Foss Launch & Tug of Seattle. Ed Pixler, marine foreman and his crew laid the keel on the 20th of October and finished her in 35 days.

Ways No. 4 key to biggest barges

The key to longer barges was Ways #4. Completed during 1968, the ways accommodated vessels up to 600 feet in length and 6,000 tons in weight. The first vessel off the new ways was BARGE 101, 360 feet long, bought by United Transportation Company, another Crowley owned subsidiary.

400-foot barrier broken

The 400-foot barge length barrier was broken in 1970 when Gunderson built two deck cargo barges, the AGATTU and KISKA, for Harbor Tug & Barge Co., another Crowley company. They were 400 feet long, 99.5 feet in breadth and 20 feet in depth. They were 100 feet longer than a football field and only one-half foot shy of the width of one and weighed 3,000 tons each. A Crowley executive said, "They're a three in one barge: pipe conveyor, railcar and oil." They were convertible to oil barges.

John Hohler said he and Jim Rettig, an executive and engineer of Crowley, carried the fight to the Coast Guard who held barge lengths down for many years. "Jim and I then approached Bruce Ward with money in our hand," and barge lengths began to stretch. (See Footnote 1)

Soon, in 1971, the largest barge ever built on the West Coast at the time, the BARGE 103, with dimensions of 430 feet by 80 feet wide by 27 feet in depth, and weighing almost 3,000 tons was built for Crowley Launch & Tug. She carried 158,000 barrels or 6-1/2 million gallons of oil in her hold.

The mammoths

Then, in the 1970's the Chevron tankers, five of them, 650 feet long, 96 feet wide and 50 feet high weighing 10,988 tons, were launched on Ways No. 4 which had been extended and strengthened to accommodate. These were the longest and heaviest vessels ever built and launched by Gunderson on their ways. More about those ships later. One might say that the Port of Portland Drydock, in 1962, was longer at launch time, but that is incorrect. She was launched in six separate pontoons, 110 feet long each, and then the pontoons were joined together in the water, her length was 660 feet.

Finally, during 1978 and 1979, Trailer Marine Transportation Co., still another Crowley division, bought four triple-deck trailer barges that measured 580 feet long, 105 feet wide and weighed 6,495 tons each. More about those ships, also later.

Gunderson's ship repair effort futile

In the fifties, mostly between 1956 and 1960, well over 100 boats, ships and barges were in the company's basins or on the ways being repaired or converted in some

manner. Many of them had their old gasoline engines replaced with new General Motors diesel engines.

One such case was in January 1957 when Robert Dant, Director of States Steamship Lines, San Pedro, California, re-powered his 48 foot yacht. He had just bought the vessel from W. P. Yaw, of Yaw's Top Notch restaurant in Portland.

The U.S. Navy submarine Pargo was repaired at Gunderson's wet dock and on the Port's dry-dock in 1958.

Andrew "Bud" Swift solicited, estimated and oversaw the repair business during a five year period in the late 1950's. He was on good terms with the various procurement officers of the U.S. Army Transportation Command, the Corps of Engineers and the U.S. Navy, and was awarded a good share of their business. When bidding a job, he walked or crawled through the ships' spaces, note-book in hand, and in no time at all made an accurate list of things needed to obtain a bid price. I respected Swift's material lists. They were thorough and easy to understand. His knowledge of marine parts terminology was amazing.

John Hohler remembered that one of his only arguments with Chet was over Swift. Sometimes Swift was difficult to locate and Hohler complained to Chet about that problem in connection with a difficult job. Hohler said, "Chet was in a very good mood, for him, and he told me that Swift brought in $50,000 a year in business and wished he had five more like him. Also I had better damned well find him to answer my questions about the job."

Several dredges owned by the Corps of Engineers and by the Port of Portland were overhauled.

Except for the re-power jobs, the repair business was unprofitable and that business was discontinued. It has been said Swift's pricing was not to blame. Gunderson simply was not efficient at outfitting and ship repair and never became so.

Peep ship to spy on fish

A 1960 job that was profitable and fun for the workers was the rebuilding and lengthening of the S. S. CHARLES H. GILBERT, FWS 1003, owned by the U.S. Fish & Wildlife Service, Honolulu, Hawaii. The ship received a new bow, which had a bubble on it that had portholes with 1-1/2" thick glass windows. They enabled marine biologists to study various species and habits of Pacific fish. Lawrence Barber, Marine Editor of *The Oregonian*, reported the GILBERT was a "peep ship to spy on fish". The old logging winch, bought by Chet Gunderson and Billy Love, performed well in bringing the ship up out of the water onto a cradle on the ways. Gunderson workers had a tough time burning the correct holes in the aluminum frames which held the portholes. The heat distorted the aluminum and the panes wouldn't fit. Finally, though, the problem was solved with a special process.

Copper Canyon

Gunderson's know-how wasn't confined to steel. In 1953, Alcoa Aluminum Company needed someone to fabricate 14,000 8-foot copper bus bars for them. The job involved partial splitting of 1-1/4" x 3" copper bars and bending the splits into a shape resembling the fork of a lawn mower handle. The work was performed in an alley adjacent to the warehouse behind the main offices at 4700 N. W. Front Avenue. The alley became known as "Copper Canyon" and still carries that name whenever that area is referred to. Special care was given to the reclaiming of the copper sawdust because it

contributed substantially to the profits on the job. In any case, working in copper was very rare for the steel men.

Bridge caissons and dam gates

In 1952, as a subcontractor to Kansas City Bridge Co. who built a bridge for Northern Pacific Railway Company at Pasco, Washington, Gunderson built six bridge caissons in different sizes up to 72 feet long, 36 feet wide and 16 feet high. At first they were to have been floated and towed 258 miles up the Columbia River to Pasco, Washington. The first two were delivered that way, but due to unseasonably low water in the Columbia, the balance had to be loaded aboard a barge fitted with timber launch ways and launched from the barge at the job site. They were filled with concrete and sunk for bridge piers.

Three sets of gate leaves for Willamette Falls Locks at Oregon City, ordered by the U.S. Corps Of Engineers and delivered in March 1953, tested the mettle of Gunderson only because they were not made of much metal. W. E. "Billy" Love was the sales engineer on this project. They were constructed out of huge, rare quality and hard-to-get select structural timbers shaped and contoured by Charlie Wahl and his carpenters and only sheathed in steel. The sawmill in Vancouver had to wait for logs big enough and sound enough from which to cut the big timbers. The leaves were 23'11" wide by 21' high. It was a rush job because the original gates had just about seen their design life run out. When one of the old gates was raised to make room for its replacement, it fell apart!

The Corps of Engineers liked the work because they came back again in 1954 for three big steel tainter gates for regulating the water flow at Big Cliff Re-Regulating Dam, Detroit, Oregon. The gates were 46 feet wide, and 49 feet high. They were attached to triangular arms which reached out to them from a hub or trunnion to swing them up and down as needed.

The Wahluke Siphon

There were some large pipe projects in the fifties for which Gunderson supplied the steel. In 1953, there were the two 6-foot diameter by 3/4" thick, 300 foot long penstocks for Columbia River Contractors at Chief Joseph Dam.

The daddy of them all, to Gunderson, was the Wahluke Siphon, a Bureau of Reclamation project in Central Washington. It was delivered in 1958 to the E. W. Construction Co., who installed the pipe in reinforced concrete in a snake-like trail through the Wahluke Slope from the Saddle Mountains. The pipe's diameter was 15'4" and its length was 9,100 feet. 1-1/2 miles of the pipe was one inch in thickness and the rest was three-sixteenths of an inch. The thinner plate was diamond plate, (also known as floor plate), a steel with raised diamond shaped treads rolled in at the steel mill. These raised treads provided a gripping action on the concrete in which they were encased. The pipe was barged 250 miles up-river, in sections of 40-feet and 48-feet long, then trucked 25 miles to the job site. 4,400 tons of steel were used in the project.

Stretching the size of a boring machine

One sticky detail was caused by a steel expansion joint one foot long but with a bore the same diameter of the pipeline. Gunderson had no tool that would machine the required bore smoothness. Neither did the one shop that came closest. Portland Iron Works had the right machine but its capacity was just one inch shy of that needed for the correct bore dimension. After studying the matter carefully, Portland Iron Works figured out a way to add one inch to their machine and did a successful job of boring the joint.

Flimsy pipe warps in concert with sun's passage

During transit the three-sixteenths pipe was so flimsy that special bracing was placed inside the pipe to maintain rigidity. When the contractor had put the pipe in place, prior to the concrete work, he complained to Howe that the pipe was egg-shaped, not round. Howe made a special trip to the site to confirm his fears. He looked at it in mid-day and observed the problem. He went to the contractor's office to study a fix, then came back later in the day, and the pipe was egg-shaped but in a different plane. He then concluded that it was the heat of the day and the cool of the night that was making the steel expand and contract as the heat followed the sun's path. Warren told the contractor, "It's your sun and I can't do anything about that." So instead of Warren going back to the Portland office with bad news, he came home with a big order for tunnel ribs. These were 4-inch I-beams rolled into circles to fit inside the pipe, to brace it and maintain its roundness until the concrete reinforcing bars were installed and the concrete was poured and set.

"The Steel Men", a brochure prepared for Gunderson by an advertising agency, displayed an artist's rendition of the siphon project on its front cover. Warren Howe, Contract Manager for the project, had previously asked for sketches. The rough sketch that the artist brought to Howe for his comments was exactly what Howe wanted to see, so he told the artist, "There is no need for a final rendition. Don't change anything." The cover was settled then and there.

Another minor problem on the job was that the pipe shipment had to pass through a portion of the Hanford Indian reservation on the river. A special permit had to be obtained. The Indians flew over the shipments in an airplane to make sure that the shipment took place as it was intended.

Gunderson tries to saw logs

The sawmill portion of Gunderson's business took place over a period from 1946 until 1955 when it fell flat. Except for the 54 inch band saws, which were quite successful, the company floundered in and out of lines attempting to find a niche in the field.

During that time the "star" salesman was August "Gus" Jonas. He was experienced in the woods. He was an expert in determining the size of equipment needed for a given operation. He contacted every sawmill of every size in the Northwest. He brought in orders for carriages, conveyors, edgers, feed tables, head rigs, log decks, and trimmers. He made the job easier for Gunderson buyers by locating and selecting the proper electrical motors and controls to power the machinery.

Every mill was custom made

There was no set model of a sawmill that Gunderson sold. Nearly every one was different. One customer had large logs and the next had smaller logs. That meant different sizes of saws and motors. Different size motors meant different size controllers. Some mills already had some of their own machinery such as conveyors and trimmers. Some wanted the cheapest machinery they could buy and others wanted to go first class. There couldn't have been more than twenty sold during the nine year period.

In the beginning of this experience, starting in 1946, the P. L. Crooks Company purchased about ten mills, mounted on trailers with wheels and tires so they could be towed to the logs rather than hauling the logs to the mills. They were tabbed "Mobil Mill". Each was equipped with an inserted tooth top saw that was about five foot diameter and a bottom saw that was about two feet in diameter. These sawed the logs

lengthwise. There was an edger to cut the pieces to width and trimmers to cut them to length. Planers were bought from others to finish the boards on their edges.

On some sawmill models the logs were conveyed on a moving carriage through band saws rather than the big circular saws. The carriage was a device on wheels that rolled over V-shaped steel rails (inverted V's). The carriage had clamps to hold a log in place as it moved through the saws. When the carriage finished its pass it returned to its original position and returned the log through the saws, repeating the process until the log was sawed up into its pieces. Some of the carriages, operated by hydraulics, returned to their original position so rapidly that they were called "shotgun carriages".

Gang mills saw logs in one pass

Leighton W. Johnson related how Gunderson got into the gang mill business, "Jonas, convinced the company to pursue a gang mill. He was sure there was a good market for a portable gang mill and that it would be superior to the standard band mill used in all sawmills of that time and today. We got most but not all the vibrations out of it, but when a log caught in its saw blades it bounced up and down. Maintenance was a big problem. It was designed for small logs and for the two by four stud market. It was set up to cut logs in one pass in two inch planks which would then be run through the gang saw edger to make two by fours. ('two by fours' for the stud market, or the 8 foot pieces used in construction of walls in buildings) From there they would go to the planers to make 2" x 4"'s. It was a good idea except for the problem with log sizes and maintenance. Our standard high-speed bandmill with a shotgun carriage could chew up a log in about the same time or even faster. The portable saw mill in the sizes we were building did not have a very good market. We built and sold only a few, the exact number is not known."

Several of the mills required up to three General Motors diesel engines driving generators and other mill machinery. One such mill was bought by the Giumelli Logging Company mill in Cloverdale, California, October 1955. Another was the Mc Logging Company, Portola, California, delivered in September 1955. This eight foot stud gang mill was powered with a GM 6-71 diesel engine, driving a 40 KW Palmer generator.

The Gunderson gang mills, perfected and patented by Leighton W. Johnson after months of experimentation, were an alternative to the circular saws or band mills in sawing the logs. Johnson had observed the operation of gang saws built by competitors. He designed a prototype and supervised its building. For weeks he nursed it patiently through its early problems, such as vibration strong enough to tear the machine apart if left running for long. Only ten or so were made and only six or seven sold. They could be mounted on a trailer frame and transported from one stand of logs to another. They had a sawing capacity of about 40,000 board feet of lumber per day.

In its log portal, or opening, through which a log passed while being sawn, the gang mill portal or frame could accommodate up to 22 saws, spaced slightly over one inch apart. If the log was just right, the saws would part the log into 21 one-inch boards. Johnson said that this combination never worked, the saw was not powerful enough to do the job. In another application, one that worked quite well, eleven saws were installed and spaced just enough apart to make ten pieces of lumber 2" thick after the log had passed through the saws. The log would have to be perfectly sized to yield ten pieces. Since they were not always perfect, and always had some taper, many would yield less than ten pieces. Also, due to the taper, the boards were wider at one end than the other. That's where the edgers came in. They would re-size the boards so that they were rectangular and standard sized. The trimmers would cut them to length.

With their teeth facing the incoming log, the saws oscillated up and down as the log was being forced through the portal between two grooved, powered feed rolls mounted on the log entry side of the mill. The feed roll grooves gave them a good bite on the log.

There were conveyors to carry the boards from one station to another. The conveyors consisted of metal frames or tables, equipped with different varieties of log and lumber chain powered by motor driven sprockets to keep the material moving.

Gang saw arbors adapted to move steel instead of logs

The arbor frames for the three gangsaws that were never sold were re-cycled into the steel fabrication department of Gunderson when they built the bridge approaches for the Marquam Bridge. They were used there as fixtures to rapidly propel the steel girders through the welding heads as they were being welded. The original grooved feed rolls that fed the logs through the arbors were replaced with smooth ones for that operation. Later the frames were re-recycled into the railcar shops. With their hydraulically operated and chain powered rollers, they were used to make the center sills and side sills as they were being welded. Though they weren't sold in the tool for which they were intended, their value was recovered many fold in their new functions.

Sawmill business dies with key sales man, August Jonas

Leighton continued, "August (Jonas) came out of a sawmill background and was one of our hardest working salesman. He traveled hundreds of miles all over the northwest and down into California and Arizona trying to drum up saw mill business. I made a number of trips with him. Jonas had a bad car accident on a trip from Bend and had recovered and had come home, but a heart attack took his life. When he died in about 1953/54 our efforts to stay in the mill business gradually waned."

The band resaws

Leighton Johnson told how Charles "Chuck" Wingrove, a Gunderson mechanical engineer who had some past experience with sawmills, "Designed an excellent band mill for us and also made some improvements to the band resaw which was our most successful piece of sawmill equipment in terms of numbers produced and satisfied customers."

The most successful, then, of all Gunderson saw mill tools was the 54 inch Band Resaw. Over 125 units were sold, mostly to Century Engineering Co. of Seattle who owned the design and bought them for resale. (See Footnote 2)

Log de-barking lathes

In about 1950, a few log de-barking lathes were built for E. V. Prentice Co. of Portland. The lathes had a stationary head with teeth that peeled the bark off rotating logs. They were not profitable nor priced low enough, so no more were made. Yet, like other inventions whose sales potential Gunderson failed to develop, Prentice and others found better ways of producing them and sold them in big quantities.

The plywood presses

E. V. Prentice came to Gunderson for a plywood press in 1950. It had several platens that were mounted on a four or six column frame. Surplus ship shafting was used for the press columns. These were turned to size by the machinists. (No record remains of the press details.)

Each of the steel platens were about four inches thick and had a lattice work of holes drilled in them so that steam could be piped through them to heat the platens. The top jaw of the press was fixed but the bottom jaw was attached to a hydraulic ram which pushed upward with enormous pressure closing the platens over the pre-glued plywood laminates while they were cured. The drilling of the steam holes in the platens was a real problem for the machinists, but eventually they got them done.

About half a dozen of these presses were made but the project lost money, and was full of "bugs". Again, Prentice found others who could build the presses efficiently and were quite successful at selling them.

The Do-Roy log tongs

One profitable item, sold to the loggers over a period of six years from 1959 to 1964, was the Do-Roy Log Tong. Nearly $300,000 worth were sold over the period. About that time cranes were being equipped with hydraulics to handle a wide variety of materials. The Do-Roy Company designed a log tong with hydraulically controlled jaws which could grasp a log solidly for easy, safe movement. He came to Gunderson and some improvements were suggested. The tongs in two sizes were burned from a special, high strength steel, "T-1", a product of U.S. Steel Corp. It was an ideal steel for the tongs. Johnson said, "There were other tongs on the market and our price was too high, but nevertheless we sold quite a few of them. They were made to last."

Sawmill machinery purchasing

Engineering and purchasing for the sawmill business was a horrendous task. There was an infinite variety of bolts and nuts, bearings, chains, motors and controls, saws, sprockets, and steel. Each sawmill being different and custom built made accurate pre-selection of these materials next to impossible. After each job, the surplus of these parts grew larger. When the sawmill business was phased out, a huge inventory was disposed of at a fraction of its original cost.

Rock wagons precursor of today's earth moving Behemoths

P. L. Crooks returned as a customer in 1955 when they ordered four Rock Wagons. These were two-wheeled behemoths that rode on tires over six feet tall and were towed by a monstrous truck. The bodies were made of high-tensile and abrasive-resisting steel. They were equipped with giant hydraulic cylinders which raised the front end of the bodies to dump their load. Only the four were built by Gunderson, but others found them profitable. Hundreds have been sold and can be seen moving mountains of rock on highway projects.

Buying the 4350 N.W. Front Avenue building

Eddie Leo, a former houseboy of Chet Gunderson, in recounting some of Chet's history, once told me, that Chet had "the Midas touch". (According to mythical Greek history, Midas, king of Phrygia, whose wish that everything he touched might turn to gold was granted by the god Dionysius. When even his food was so transformed, Midas asked the god to free him from the 'golden touch'.) In Chet's case, his touch produced property. The 4350 N.W. Front Avenue building is a good example of his Midas touch.

In 1960, to make way for construction of the "Minnesota" Freeway through Portland's east side, now known as I-5, many buildings had to be demolished. Rudie Wilhelm Warehouse & Trucking Company had an office and warehouse on one of the streets where the freeway was to be built. It had to be wrecked and moved.

Jack Eatch Company–gravel hauling & wrecking

Two long-time friends of the company were Jack Eatch Sr. and his son, Jack, Jr. They had a gravel pit and several dump trucks. They also wrecked buildings and used their trucks to haul the debris away. Hundreds of truckloads of their gravel and fill materials form the foundations of Gunderson's building, railroad tracks and roadways. Jack, Jr. did most of the selling for the company. He claimed their gravel was the sharpest and jaggedest available in the area, because when it was laid down, it locked together and formed a strong compact. He claimed the gravel from other pits was round and smooth, and would always shift under weight and wet conditions.

Young Jack telephoned me and said he was about to wreck the Wilhelm building, but before he did so, he offered, "Do you want to buy this building? I'm asking $10,000. But you have to come over and mark all the pieces as to where they go and haul them across the river to your plant. I'll put them on the ground." He had already been paid to demolish the building and had to take it down anyway. When I told Chet about the building it didn't take him long to make up his mind to look at it. The brothers had some spare property and contemplated putting a small industrial development on it. At the time they didn't intend to use it for manufacturing.

Chet makes quick decision to buy building

Chet got into his car and drove to the east side and inspected the building. He soon returned and said, "Benny, issue a purchase order to Eatch on the condition that our carpenters go over to the wrecking site and match mark the pieces as they come down for easy re-erection." Other conditions were that Eatch allowed the carpenters to pull out all of the nails in the lumber and to cull out any unwanted material and give it back to Eatch to haul away. Rudy Krause and his crew of carpenters match-marked the lumber as it came down off the building. Then they shipped it across the river to the Front Avenue plant where it laid idle for several months until the brothers found a tenant for the building - Gillespie Truck Parts.

Putting it back up

Larry Preuss, a fine construction engineer, who anticipated Chet's every whim, laid out the foundation and erection plans so that everything would be in readiness for putting up the building again. Concrete foundations were poured, the water supply and meter were piped in and Everett Hill saw to it that electricity was brought to the site. Re-erection of the building took a little over three months.

The cost of the building was virtually nothing compared to what a new building would have cost. Just a few of the long span, laminated timber trusses would have cost more than the price paid to Eatch. In addition, several long span trusses were left over and later used in more Gunderson construction. Once again, the junk yard was deprived of a new tenant.

In about three years, Gillespie got into financial difficulty and went out of business. Even though they weren't there, the building became known as the "Gillespie" building. It was then that Gunderson was bursting its seams so they took over the building for offices and manufacturing. The manufacturing part of the building was known as "Pete Welk's Aluminum Shop".

Footnotes:

(1) John H. Hohler was former Marine Engineering Manager. In this capacity he was very instrumental in securing barge business for the company. He joined Gunderson in

1952 and held a variety of positions, including draftsman, engineer, GT Tanker project manager, yard construction manager and outfitting manager. He retired in January, 1980. Almost immediately, he joined Precision Cast Parts Co. of Portland as an engineering consultant in conjunction with one of their building projects. As his letter of January 23, 1992 indicated, he was still consulting with Precision Cast Parts, but also was performing consulting for other investment casting firms in Florida and Mexico. He said in his letter, "It looks as though I will be building a plant in Mexico this fall." He and his wife Sue have four children and live in Sandy, Oregon.

In the early 1970's, Lt. Commander William R. Sample, who had been Resident Supervisor of Ship building in Portland from 1964 to 1969, (in charge of Navy inspection at Portland shipyards) retired from the Navy and joined MRED. He became Manager of Marine Engineering when Hohler became Project Manager for the Chevron Tanker program. Sample held the engineering position until 1976 when he became Assistant to the President, John E. Carroll, Jr. Sample was succeeded by Terry Halpin, who holds that position as of this writing. While at MRED, Sample married a purchasing department employee, JoAnn Cox. Sample retired in October 1978. He and JoAnn bought a home in Oak Harbor, Washington on Whidbey Island. They pass their leisure time sailing the waters of Puget Sound aboard their 36 foot sailboat.

(2) In an undated letter from Fritz Dummer, retired Machine Shop Foreman, Fritz said about 150 band resaws were made and sold. "Some are still operating," he said. There are no records to resolve this discrepancy.

Chapter 12

The FLIP

Floating caisson gate

As if to prepare Gunderson for bigger things to come, The United States Navy yard at Bremerton, Washington built the world's largest (at the time) graving dock, number six, for drydocking the largest of their ships. They needed a floating caisson gate for the dock. Gunderson won out in the bidding. The gate measured, 176.5 feet long, 62.75 feet high with a 20-foot girth or thickness. It weighed 960 tons. The gate was constructed on its side then after it was launched its ballasting compartments were flooded to tilt it upright. It was then towed by Pacific Inland Navigation Co. to Bremerton. The Coast Guard, in approving the tow of the gate, prescribed that a drogue (drag) chain, comprised of heavy ship's anchor chain of sufficient length to provide tracking ability for the gate, be attached to the aft end of the tow to provide tracking ability. (So it would follow the tug correctly). At a cost of $18,000 the chain was purchased and hooked onto the gate.

Sometime during the crossing of a shallow portion of waters in Puget Sound, the tugboat captain found it necessary to cut the chain loose to prevent snagging of some telephone cables that lie in the channel. The $18,000 anchor chain was lost, but after some time of haggling back and forth, the yard's claim for recovery of expenses for the chain was paid. The gate was delivered safely to its destination in October, 1961. It was the first structure of its kind ever built in the Portland area.

Floating drydock for Port of Portland

A 25,000 ton capacity, floating drydock for the Port of Portland was finished and delivered in October 1962 and formally accepted and dedicated in February, 1963. It was the largest single structure in size, but not weight, ever built by Gunderson. Its dimensions: 110 feet wide, 660 feet long, and 60 feet high, bigger than two football fields. Inside its wingwalls its dimensions: 601 feet long, 112 feet wide and 37 feet high. It took about 7,200 tons of steel to build. Only one other structure ever built by the company weighs more, any one of the five Chevron Tankers built during the 1970's. Their weight was about 11,000 tons each.

Under the guidance of Warren L Howe, Jr., Contract Manager at the time, a great deal of ingenuity in bidding and building the project made it a highly successful one. The drydock was built on Ways #3 in separate 112 feet wide by 110 feet long "pontoon" sections. As each section was launched it was joined to the previous one by welding. 24 24-inch, 5,000 gallon per minute, electric water pumps were able to "dewater" or pump the water out of the dock to make it buoyant enough to lift a ship weighing 25,000 tons to a dry height in 52 minutes. When the ship was ready to leave the drydock, large water valves were opened to flood water into the dock's tanks for ballast to sink the dock and allow the ship to float out of the dock in just 32 minutes.

Columbus Day storm

Sometimes the weather would get out of hand and cause serious disruptions at Gunderson. One occurrence in particular was the Columbus Day storm. E. M. "Benny" Lundquist recorded it in his notes that follow:

"On Friday, October 12, 1962, when the Columbus Day storm struck our area at about 5:00 P. M., I was sitting in my office at the Front Avenue plant finishing up the day's work. A sudden windstorm came up, intensifying each moment.

"There were evergreen shrubs outside my office window that were blown almost horizontal from the force of the winds. Maxine, my wife, telephoned me from home urging me to come home because of what might happen during the terrible storm. She had heard radio reports of severe winds of hurricane force hitting the southwest coast of Oregon and raging inland toward Salem and Eugene.

"On my way home up Front Avenue and Barbur Boulevard the power poles on each side of the street were swaying back and forth with their wires swinging wildly, some wires breaking loose and shorting against each other causing an electrical fireworks display. There was flying debris of every kind including automobile hoods that had been blown off cars, sheets of loose plywood and tin roofing. There were loose timbers, garbage cans and lids, and tree branches rolling in the streets making the streets nearly impassable. I would speed up and slow down my auto to time my passing between the swaying power poles so that if one fell over I wouldn't be under it.

"About 6:30 I got a call from Knut Knutzen, General Manager of American Steel Warehouse Co., a business neighbor over on Yeon Avenue. He said, 'Benny, I'm still at the office and have been watching the roof of your plant being lifted off by the wind and it's flying toward the river side of your property. About three huge sections just went, I believe, in the river!' I said, 'Thanks a lot. Thanks for letting me know.'

Orders to rebuild

"I then called N. L. Nick Thomas, who was Plant Superintendent at the time. I soon got a callback from Nick notifying me of a meeting set by Chet for the next morning, Saturday at 8:00 AM, to discuss the situation and decide what could be done. We made up a list of people to call so that everyone essential to the problem would be present.

"Jack Herron and I represented the purchasing department. Warren Howe, Contracting Manager; Larry Preuss, Construction Engineer; Leighton Johnson, Chief Engineer; Big Joe Huserik, Master Carpenter; and Nick Thomas were all there. Chet was waiting for us when we arrived. "We all took a tour of the plant to assess the damage. There had been a roof loss of 80% of Bay I or about 480 feet, about 10% of Bay II or about 60 feet, 70% of Bay III or about 400 feet and 70% of ways #3 or about 300 feet. In addition, there was widespread, minor damage to the remaining roof and sides of some of the buildings.

"After the plant inspection, the meeting was resumed. Chet's main message was he wanted to start rebuilding immediately. He instructed the purchasing department to buy the wooden timbers, framing and roof sheathing that very morning, NOT 'next Monday' so that re-construction could begin as soon as the material started arriving. He asked for the costs so that an insurance claim could be activated at once. With Big Joe's help, a list of lumber, building materials and fastenings was made up so they could be ordered that morning. Jack Herron and I went right to work calling our suppliers at their homes or wherever they could be found and, indeed, materials started arriving the following Monday morning in a trickle but in substance within days. By then the re-building project was well under way under Joe's hammer.

"Chet's visionary action that morning proved again that he was "the builder" of the Gunderson family. It was another example of his decisive nature.

"Incidentally, we scooped the other industries that needed lumber because it took them weeks instead of days to draw up plans, secure the material and to rebuild. Our plans and order lists were all verbal and took place one day after the storm and on a Saturday morning. Construction repairs were completed in about three months."

Other disasters

On another occasion the weather caused severe flooding. In December 1964, during the Christmas holidays, there was a heavy snow pack in the mountains but unusually warm winds caused rapid melting of the snow. In a few hours the water levels of the Willamette River were at flood stage in several areas. Photos of the flood conditions show water over Front Avenue north of the Broadway Bridge and near the Crown Flour Mill. It was quite damaging to the company, inundating the structural and boat work on the ship ways. At the time an order for Copper Concentrate railcars was in process in Ways #2, there being no marine work for those ways at that time. A photo shows one of the car bodies that seems to be "afloat" in the water because its wheels are not visible. Another photo shows some of Gunderson's structural work "floating" and partially submerged under the Marquam Bridge approaches.

These record floods in December, 1964 also caused severe damage to the Southern Pacific Railroad along its Cascade Line between Oakridge, and Crescent Lake in Oregon. The violent storms that began a week before Christmas continued for 21 days. Unseasonable melting of the snow pack in the high mountains caused bridges to be washed out; avalanches swept away sections of railroad bed and buildings were broken up and washed down into the rivers. 130 feet of the 300 foot Noisy Creek bridge on the rail line was demolished and swept away when a thundering earthslide came down the mountain.

Southern Pacific called on Gunderson to supply, fabricate and erect the replacement steel for the structure. They wanted the material "yesterday" to enable railroad movements to resume. They kept Warren Howe, Contracting Manager, on the telephone all night describing the sizes and specifications of the steel they needed. There was no time for plans to be drafted, so Howe supplied the shop with quickly drawn sketches. Steel that was not on hand was purchased and delivered from local jobbers within hours of Howe's phone order.

The steel was completed in four to five days and started rolling to Oakridge by truck. The job site was between two railroad tunnels and the only access to the site was by train from Oakridge about four hours away. A picture in the January-February, 1965 issue of the *Southern Pacific Bulletin*, showed a welding machine emerging from the tunnel suspended on the end of a rail-mounted crane boom.

Pat Gillenwater of Gunderson was assigned the task of overseeing the erection of the bridge. Ironworkers were supplied by Morrison Knudsen Co. The work went on despite snow and darkness. Benjamin F. Biagginni, the railroad's president, was on hand in person to keep the job moving. His company had taken over the whole town of Oakridge's hotel rooms and restaurants.

Within three weeks the bridge was completed and back in operation.

LCU's and Sub chasers

The 1960's were favorable for Gunderson's marine operation. In addition to a large number of barges there were nine LCU ships for the U.S. Navy in 1961, and six Submarine Chasers for the U. S. Navy for re-shipment to Turkey for its navy. One of the six Sub Chasers was shipped piece by piece from the engines, propellers, and steel plating to the nuts, bolts, pipe and fittings so that Turkish workers could reassemble the boat. A computer card for each individual part was furnished in strict conformity with navy language and nomenclature. These and the ship's plans were converted from English into the Turkish language. Two of the six Sub chasers were built on a common

cradle and launched simultaneously, a typical Gunderson innovation to save time and money.

The Turkish navy used these vessels to patrol the waters along their coastline and in the channels between the Black Sea and across the Black Sea and the Mediterranean due to a very definate threat from Russia across the Black Sea.

Construction on the Sub chasers began in 1963 and the last ship was delivered in July 1965.

In 1967 The Boeing Airplane Company ordered an aluminum Hydrafoil ship hull which was delivered to Seattle by truck where it was outfitted.

From 1967 to 1969 the navy ordered 105 ASPB Assault Support Patrol Boats and 20 more LCM(8) Tank Lighters.

The FLIP

The most unusual marine craft ever built by Gunderson was the FLIP (Floating Laboratory, Inverted Platform) for Scripps Institute of Oceanography, University of California at LaJolla, California, delivered in 1962. Its principle designer was Dr. Fred N. Spies, who had been involved in deep sea salvage work. The construction was directed by Commander Earl D. Bronson, U.S.N., (Ret.) of Scripps. It was a profitable venture for Gunderson, and the publicity received during construction, launching and after delivery was priceless. It was featured in *Life Magazine*, *Illustrated London Times* and many marine oriented publications. Unfortunately, perhaps an oversight, the article in *Life* gave all of the credit to Scripps and none to the shipyard.

Flip was a 355-foot long steel tube-like ship, 20 feet in diameter at one end tapering down to 12 feet in diameter at the other end to a point where there was a forward operating house which contained a wet lab, electronics laboratory, living quarters for four persons and a machinery room. This house was 20 feet long and 12 feet wide. For towing purposes the house had the shape of a ship's bow.

Lawrence Barber, a marine editor for *The Oregonian*, when describing the Flip in a June 18, 1962 news article, referred to it as an "Odd ocean going soda straw."

The craft was towed in a horizontal position. It floated like a ship but when ballasted with water it inverted vertically leaving the house out of water and the stern or tube-like portion up to 300 feet beneath the waves. By applying air pressure in the tanks, water was expelled from the ballast tanks to right the vessel again. To put it another way for the reader, the craft could be flipped from its horizontal position to a vertical one, while at sea, by flooding its long aft ballasting section, leaving its four story bow section and work house above the water line.

The Flip's machinery was gimbaled (installed to swivel) so that it could be operated when the vessel was sailing, either horizontally or vertically. When suspended by a gimbal, machinery or equipment, such as a compass, will retain its horizontal position with the pull of gravity.

Its crew was able to descend down two water tight tubes for extremely delicate, underwater acoustical work and other observations. By pumping high pressure air into the ballast tanks the water was expelled and the craft righted itself to horizontal.

The dump scows

Another distinctive type of craft were the two 3,000 cubic yard dump scows which were built for Umpqua River Navigation Co. in 1968.

The *Torch & Stinger* carried a description of the scows in its March 1980 issue in conjunction with a similar scow which was built for Smith-Rice Company of Alameda, California:

"Built in two halves along its longitudinal axis, the barge incorporates an unusual self-dumping design. Two giant hinges connect the barge halves at either end. A giant hydraulic cylinder near each hinge controls the opening and closing sequence, powered by a diesel engine. The system can be operated remotely by radio from a tugboat. 'The best feature of the self-dumping design is its economy of operation in that it can be loaded in the conventional way and then dumped at a prime disposal area without further equipment. Radio control adds to the safety, speed and simplicity of operation,'" explains Senior Equipment Designer, Don Kiive.

"By design the hinged dump barge tends to open by itself when loaded and tends to close when empty. This is due to the different transverse locations for the center of gravity and center of buoyancy in each half of the hull. Flotation comes from watertight compartments within each hull half.

"When the barge is loaded, its center of gravity is well inboard of the center of buoyancy, thus it tends to open the barge. Dumping the load causes the center of gravity to shift outboard; the resulting moment force tends to close the hull halves. Hinges at the deck connect the two hull sections, allowing each half of the hull to act as an independent unit when rotating. Hydraulic cylinders also connect the two barge halves, primarily to control opening and closing movements, with the load and buoyancy providing most of the force as explained above."

Another marvelous machine by Gunderson!

Business life at Gunderson wasn't always rosy. There were jobs that were not profitable. On one, Chet didn't seem to be too upset, "Well, we learned something anyway, the next one will be easier."

Most jobs were subject to customer inspection. Customer inspectors ranged from overly generous to downright unreasonable.

Gunderson's expertise broadened

Gunderson did business with the Army, Bureau of Reclamation, (a branch of the Interior Department), the Navy and other branches of the United States Government; the States of Alaska, California, Oregon and Washington; The City of Portland, the Port of Portland, and hundreds of private customers. Thus the company encountered a wide variety of inspection agencies. Each one had its own peculiarities and Gunderson had to be prepared to confirm or rebut their findings. As a result Gunderson's expertise in testing of materials and workmanship broadened with each experience. To quote Leighton Johnson, "Gunderson's welding was flawless." Knowledge of its customers' job specifications increased and was retained; and with each successive order, compliance became much easier.

Gunderson has always been proud of it workmanship. It never knowingly nor deliberately put out a shoddy product. It's true that Gunderson often came up with design changes that reduced the cost without impairing quality or function; but the customer was made aware of these. Most problems arose from sharply worded specifications which were, in some respects, "beyond the state of the art" or misinterpreted due to the ambiguity of the language. If the work wasn't good, it would come back to haunt the company in the form of an expensive claim for fixing the defect. On the other hand, the product made under the supervision of a tough, unreasonable inspector, though passing with superior quality, was fraught with cost overruns.

One inspector had a habit of marking his "REJECTION" in three or four foot letters and scribbling all over the work with his comments. It became necessary to either tone down the markings or charge the customer for removal and repainting the areas. The markings were fewer and smaller.

Bruce Ward confronts U. S. Navy

On a contract for 33 Assault Support Patrol Boats, (ASPB's) in 1967, for the U.S. Navy, Bureau of Ships, during Bruce Ward's term as president of the company, quality disagreements and change order problems caused a slow-down of the work and a log-jam throughout the plant. More seriously, it meant a slippage of progress payments that were coming due.

Gunderson had developed and designed the ASPB's and they were coming along very well when a procession of generals, admirals and marine colonels began arriving at the plant or telephoning making verbal order changes, then later neglecting the approval of the change orders. The changes began to accumulate, costs were rising and progress payments were inadequate. The yard was in peril of failing to deliver on time and losing money on the job.

Bruce made an unprecedented decision. He sent a telegram to the Bureau of Ships with a copy to Admiral Jamie Adair, which in effect said, "Please be advised that, due to your inability to authorize change orders, we are stopping all production on the Assault Support Patrol Boats, contract number, etc..." He got an indignant call from the Bureau, who said, "This is not the way things are done, get on with the job and we'll discuss the changes later." Bruce stood his ground and refused to back off of his position. Soon he got a telephone call from Adair who apologized for the position in which the Navy brass had placed Gunderson. He said, "Mr. Ward, you've got my word we'll get the paper work done immediately. Please proceed and keep us advised if there are further problems." As promised, Adair shook up the Bureau, the changes were authorized and the job proceeded successfully.

Many paint problems

Some of the worst problems with quality were associated with painting. Much of the painting was done outside or in drafty areas due to the bulk of the product. The winds were fierce down on the ways. To provide outside cover was prohibitive but in some simpler cases it was done. The moisture content and temperature of the air varied drastically each day. As a result, the dryers in the paint had to be altered as often as the weather changed so that it could dry without sagging, blistering or pinholing.

Quite often a supplier sent in paint of poor quality; and due to the press of time, considerable amounts were applied before the problem was discovered, diagnosed and corrected. Paint that had been applied then would have to be taken off and the correct paint put back on. Then the enormous correction costs either had to be absorbed or collected from the suppliers depending on the proof presented. Usually, even though a supplier would accept a charge-back for correction of the paint, it was impossible to recoup the lost momentum and time in the shipping schedule. Gunderson's paint buyer said, "Oh, what could have been achieved with a testing laboratory of our own. Each batch of paint could have been tested for compliance against the correct formula. If the paint didn't conform, the supplier would have had to either correct the batch himself or replace it before it could be applied." There were some horrendous claims against paint suppliers. One supplier, Pittsburgh Plate Glass Co., had so many claims that they refused any more business from Gunderson for a time.

On a tanker program a bad batch of paint was applied in good faith and shortly after drying whole sheets of paint fell off as if it was strippable wallpaper. There was a legal battle as a result.

Chapter 13

L'IL TOOT

L'IL TOOT found her way into a number of chapters in this collection of memories and seemed to deserve her own chapter. L'IL TOOT is rather like GB itself – resourceful, hard-working." So here is her chapter:

The mini tugs

During the early 1950's Gunderson built a number of small pond boats and dredge tenders for local customers.

One of those pond boats, a 17 foot "mini tug", thought to have been made in 1954, was returned because the customer couldn't pay for her. Somehow she got the name, L'IL TOOT. Maybe because of her distinctive whistle for such a little boat.

Toot salvaged logs, launching cradles & ran errands

She has distinguished herself as the workingest work boat in Gunderson's fleet of one ship. Since going to work for Gunderson, she has attended every launching, rounding up the launching cradle debris in the river so most of it could be used for the next launching.

When the Chevron tankers were launched, the job of surrounding all of the cradle timbers with a log boom was given to a larger tug. Once the boom was secure then the TOOT took over the salvage work. One can get an idea of the massive amount of cradle debris in a photo of GT Chevron WASHINGTON on February 22, 1975, shown in the *Torch & Stinger*.

She has salvaged logs, both floaters and sinkers that came floating down the Willamette River past the Gunderson plant.

According to John Hohler, during the building of the ship ways, Chet Gunderson would not approve the expense of paying for wood pilings to be driven under the ways where they entered the water. So "Big Joe" Huserik, head carpenter, sent L'IL TOOT out into the river for floaters as they passed by and got enough to put under the ways so they would support a launched barge without collapsing.

Between 1956 and 1960 when Gunderson was active in the ship repair business, much of their work took place across the Willamette River at the Port Of Portland's Swan Island dry Dock facility. L'IL TOOT ran errands back and forth between the Port and Gunderson's yard. Sometimes she would ferry workmen and tools across the river. It was almost as fast going over there on the TOOT as by automobile up Front Avenue, over the Broadway Bridge and out Greeley to Swan.

Chief marine engineer praises L'IL TOOT

In the December, 1967 issue of the *Torch & Stinger*, Johnny Hohler, former Chief Marine Engineer at Gunderson, proudly lauded the boat as she maneuvered and pushed the 74 foot long LCM-8's around our boat basin even though they were four times longer and 35 times heavier than she, "The quality of workmanship in production of marine craft at Gunderson Bros. is again indicated by the performance of this obscure little giant in its class." The same article said the boat has served as log "bulldozer", tug boat, catch craft, and many other purposes.

Little ship frequently mentioned

This little ship has been the subject of several *Torch & Stinger* articles. In the November, 1976 issue, there is a photo of her dry sitting on wood blocks, in a disheveled state, awaiting repairs. the caption accompanying the photo said, "FMC's most infamous craft, L'IL TOOT, a 13-foot mini tugboat, designed for log pond use, was built by our division in 1940. She has constantly been a rugged l'il work-horse towing timbers and cradles after launchings and handling exterior jobs on the tankers during dry-docking. TOOT is powered by a 1969 Chevrolet 392 cubic inch, six cylinder engine." (There is some controversy as to when L'IL TOOT was built. See comments by Fritz Dummer later in this chapter.)

The photo of L'IL TOOT shows her hull in need of paint. Someone irreverently lettered her bow, "GT 4", from one of the Chevron tankers.

Some say L'IL TOOT is the former Gunderson JEEP. The caption read, "JEEP Readied For Maiden Trip." The article said, "Yep, the Gunderson "Jeep" is ready to go. Shown here at the outfitting dock where she is getting finishing touches, the little craft soon will be towing logs in streams too shallow for larger tugs. The Jeep is capable of tremendous towing power, although she draws only 15 inches of water at work." There was a photo of the JEEP in the *Gunderson Gunner*. This log boat looked much larger than L'IL TOOT and she had a much larger cabin that did the TOOT. The TOOT's hull was much shorter than the JEEP. Furthermore the JEEP's lines were quite dissimilar. She had no rub rail like TOOT. It appears the TOOT had a wooden rub rail all the way around her, slightly above her mid-waist.

Fritz Dummer, retired Machine Shop Foreman, who worked at Gunderson from 1942 until 1979 should be the final authority but even he does not have the answer. He wrote to me, in an undated letter of a few years ago, "I try to remember the 'Little Toot' that you mentioned. That could have been one of three craft we had there. #1 was the first life boat we built and we kept it and put a shack on it to use on the river. #2 could have been Chet's boat before he had us build the larger 'Zimmie' or 'Gee Bee' as he named it. #3 was the pond boat we built for a sawmill operator and repossessed and then used it to transport equipment and personnel across the river to Swan Island jobs."

None of the old hands like Leighton Johnson, former Chief Engineer and Joe Huserik, former carpenter boss, were able to shed any light on L'IL TOOT's precise origins.

Perhaps the name is just a legend, and she is the three boats enumerated by Fritz.

In any case, her exploits are legendary, somewhat akin to those of the mythical giant log faller, Paul Bunyan, or the fabulous steel maker, "Jack Sagarac".

So I'll go out on a limb and give you my version, which, until refuted, will stand undisputed:

During 1954, Gunderson built a small log pond boat and for some reason she couldn't be sold, so they kept her for yard purposes.

Chapter 14

Booby Hatch

As soon as the facilities at Front Avenue were finished in the early 1940's, Chet Gunderson built a boat-house to serve as his city residence. This boat-house was a two-level structure. The living quarters were on the top level. I believe by that time, he and his first wife, Hazel, had divorced. The lower level was a sheltered water basin surrounded by a walkway where Chet could moor his boat, a 65 foot cruiser, get off it and walk upstairs to his home without being exposed to the weather. Access from the plant to the boat-house on the river was a covered, floating walkway which originated on-shore next to a two-car, two-story garage. The garage had an apartment on its second floor. This apartment was referred to as "The Booby Hatch".

A place for guests to congregate

Chet and Al used the Booby Hatch as a guest house for their business and personal guests. It was also a handy place for Gunderson office and shop executives to snack, refresh themselves and talk over the day's problems. It was always well stocked. For a time, Otto Runte, an old friend of Chet's and Al's lived there. He became the unofficial company greeter and served refreshments of a wide variety to booby hatch guests.

A visit to Chet's boat-house living quarters was an eye-opener. It was attractive throughout–much like one might expect of a Park Avenue apartment. In the living room there was a papered wall panel, ostensibly of a lovely forest scene, but on closer examination and concentration one could discern some exquisite female figures.

Later on, it was at the Booby Hatch that the disagreements between Al and Chet began to be heard. It was feared that, soon, one or more of us would be "caught in the middle" or be forced to take sides against one or the other brother. A gathering might be having an enjoyable time discussing the numerous events of the day when, without much apparent cause, the brothers would be cursing each other.

The Gunderson brothers begin to quarrel

There were times when their disagreements became so heated, some outsiders felt Al's and Chet's ability to make financial decisions was hampered. When business turned down and finances tightened, the company's bank knew of the feud and threatened to withdraw its support or asked for more collateral. One time the bank misjudged the brothers' loyalty and went too far with the threats. The brothers got together long enough to change banks. They talked to each other through their attorneys.

Between 1960 and 1965 the brothers quarreled frequently, using the most colorful and explicit language. They conflicted in their management style and in personal matters. One heated issue was Chet's dislike of Al's son, Bob. One time Bob went to Chet's office for a discussion, but in a few minutes, came rushing down the hall with Chet after him, the air blue with Chet's disapproval of him. Another was their criticism and uncomplimentary remarks about each other's personal life.

Al fires and Chet re-hires

Toward the end, Al fired one or more of Chet's shop and office men, but Chet hired them back. On one occasion when Chet was away from the plant, Al fired Nick Thomas, Plant Superintendent. Al instructed the security guards to keep Thomas off the premises

if he returned. Chet, in his black Cadillac, chauffeured Nick back to work through the guard gate leading down to the boat house. The guard attempted to enforce Al's instructions, but Chet invoked his rank, "I'm the president of this company and you're fired if you don't learn who's boss around here." The guard apologized and returned to his security shack.

Thomas remained plant superintendent until Chet retired, then he was fired again by Al. Nick had managed the shop through its original years as a carbuilder and had coaxed it through many of its growing pains. Al also dismissed Johnny Hansen, a shop foreman; Warren L. Howe, Jr., Contract Manager; and Larry Preuss, Gunderson's Construction Engineer; all excellent men who made great contributions to the company's growth. It isn't known exactly what it was that Al didn't like about Nick's work–maybe Al felt that the jobs were not moving fast enough. I believe that the others were not willing to transfer their loyalty from Chet to Al.

On leaving Gunderson, Thomas went into his own business, Pacific Tank Co., building tanks. He hired Hansen and W. E. "Billy" Love. Hansen had been a strong shop foreman under Thomas; and Love, having retired from Gunderson, wanted to remain active in his tank engineering profession. Nick's business was very successful, and on his death, it was taken over by his son, Harold. The son later sold the business to others.

Preuss remained under the employ of Chet Gunderson and supervised the construction of a new residence and "gun club" on Chet's Scapoose acreage during 1965 and 1966. Preuss also did some bidding for jobs in behalf of Thomas's Pacific Tank.

Brothers decide to sell business

Finally the brothers decided to sell the business. Aside from their differences, the main reason for selling was the huge tax consequences on the remaining brother, or on their heirs, if one or both of them died.

The first suitor was a firm with a reputation for taking over asset-rich firms, selling off the assets for cash and closing the business. They sent an accountant to review the deal with the two brothers. The deal was squelched when the accountant demanded they open their books for his inspection. Since their near-bankruptcy experience with their bank in the late thirties and early forties, they refused to open their books to anybody. They had set a price and were not willing to take any less.

The second effort almost succeeded. In early 1965, the Evans Products Company and the brothers had reached a tentative price agreement but nothing was formalized. C. Bruce Ward said Evans all but had the company bought in 1965 for $3 million. Evans manufactured and distributed building materials and was a lessor of transportation equipment. After failing to buy Gunderson, they later entered the railcar-building business in Plymouth, Michigan. After a few years they failed in that effort.

It was also rumored at the time that Consolidated Freightways had made an offer for the company but this cannot be substantiated.

FMC buys Gunderson

At or near the time Evans was ready to sign a buyout agreement, FMC Corporation heard of Gunderson's pending sale and became interested. In May, 1965, James E. Hait, Chairman and Chief Executive Officer of FMC, and an associate bettered Evans' offer and the deal was accepted subject to some refining of price.

On June 1, 1965, Gunderson Bros. Engineering Corporation was acquired by FMC Corporation and on August 6, 1965, was named a wholly owned subsidiary of FMC's Ordnance Division in San Jose, California. This was the culmination of a feud that had

begun brewing about fifteen or twenty years before and had intensified to the point where the brothers rarely spoke to each other in the last five.

Despite their long term hostility to each other, the brothers, each in their own way, energized the Gunderson businesses from meager beginnings to a corporate giant. Through the years, many thousands were employed by them, and Portland and Oregon received great benefit and growth from their efforts.

As to the price FMC paid for Gunderson, there were several numbers floating around but a little over $6 million seems close to the correct number. C. Bruce Ward, who became President of the Company shortly after Robert Gunderson died in 1967, confirms this. Company documents indicate that FMC agreed to pay Al and Chet 81,320 shares of FMC Common Stock as of 11:00 A. M. August 6, 1965. In addition, FMC agreed to pay 12,500 more shares "If net income exceeds $600,000 for fiscal year ending May 31, 1966." That brought the total number of shares for the deal to 93,820. Notes of the sale said, "FMC to deliver two additional shares for each $40 of such excess (of net income of $600,000) up to but not to exceed 12,500 shares, one-half Chester E. Gunderson and one-half Alvin E. Gunderson." On August 6, 1965, the stock sold at $69-1/4 per share which would make the total package of 93,820 shares worth $6,497,035.

There was a note in Al's handwriting that looked like a counter offer to the 12,500 share kicker. It read, "15,000 shares," which would have brought the total to 96,320 shares. Another note in Al's handwriting read, "106,060 shares," but this appears to be a beginning negotiation number. An effort to seek confirmation of the final figure from FMC was fruitless.

The records for 1966 were not located, so it is not known if the May 31, 1966 benchmark was achieved. The Gundersons had a healthy year in 1965. They built 2,314 railcars, seven barges, two ship hulls and one barge conversion, a very good year. Knowing how Al and Chet forgot their feuding when it meant money to them, it may be assumed they did, in fact, exceed the benchmark and receive the additional shares.

The entire company and its divisions, except the Eugene Hotel, was sold to FMC. The hotel remained in the Gunderson families until it was also sold.

Chet Gunderson resigned and retired from business life on August 6, 1965. Al Gunderson was made president of the new FMC subsidiary. Emiel T. Nielson, Jr. was made Vice President, and Charles H. Hawkins, Gunderson's Controller, was appointed Secretary-Treasurer. Nielson was President of FMC's Ordnance Division. Robert E. "Bob" Gunderson, Al's son, was named General Manager.

Robert E. Gunderson appointed Vice President

On October 4, 1965 a board meeting was held and Robert E. Gunderson was appointed Vice President, and was "vested with all the duties and powers of the president until the president's successor shall have been elected or the president shall have resumed his duties."

Al was grooming Bob to take over the presidency of the company. He wanted to travel and enjoy his remaining years at leisure. For a time he acted in a consulting capacity to assure that Bob would learn his functions correctly.

C. Bruce Ward joins Gunderson

C. Bruce Ward became acquainted with Gunderson Bros. during the early part of 1961, when he was a salesman with U.S. Steel Corporation. When Frank Stewart, the U.S. Steel salesman calling on Gunderson, was transferred to Pittsburgh, Pennsylvania,

Bruce took over the Gunderson account. Gunderson was his largest customer in the Portland area.

Bruce signed on at Gunderson in the summer of 1965, suceeding Warren L. Howe, Jr. whose title was Contracting Manager. This was just before FMC took over. Bob was elected Assistant General Manager by his father and Al wanted Bruce to be Sales Manager. Bruce declined the job, insisting that he go into shop management for two to three months. Al wondered, "Why to you want to do that?" Bruce said, "If I'm going to sell something, I'd like to know something about it." So Bruce said he got some overalls and a brown bag and spent two months in the plant. He took Nick Thomas's job as Plant Manager.

After two or three months, the shop was humming again under Bruce's leadership but he now wanted to get back into sales. All of the shop men liked Bruce's sincere and sensitive way of running things.

Bobby Gunderson took Bruce on several trips to introduce him to Gunderson's customers in the trade. Al began a semi-retirement. Bobby became General Manager and Bruce became Sales Manager.

Landregan replaces Ward as Production Manager

Meanwhile, in late 1965, Bobby Gunderson hired Robert J. "Bob" Landregan to take over as Production Manager even though he had never run a shop. That enabled Bruce to come back into the office as Sales Manager. About six months to a year later, Landregan was transferred into engineering as Manager over both the rail and marine engineering departments. That was when Bob Gunderson thought the shop needed different leadership, so he recalled Ward from sales to take over as Plant Superintendent once again.

Before joining Gunderson, Landregan, an engineering graduate of Purdue University, was a mechanical engineer with the Chicago, Burlington & Quincy Railroad, (CB&Q). Landregan's father had been a locomotive engineer with the CB&Q. Bob's (Landregan's) blood ran thick with railroad lore.

Ward returns to being Plant Superintendent

Bruce said, "Landregan didn't work out as plant superintendent. Many in the shop had told Bobby that they didn't think he was suited for that job." During May or June of 1966, Bruce was on vacation in California when he got a call from Bobby and was told to get on a plane and come back to the office, "We've got some critical problems." So Bruce came back and walked in to Bobby's office (which, ironically, had been Chet's) and saw, sitting there, Bobby, Charles H. "Charlie" Hawkins and E. M. "Benny" Lundquist. They had decided production was slowing down again and that Bruce was the only one who could get the shop humming again. All of the shop guys liked him. Bobby asked him to take over again as the Superintendent. Landregan was then appointed Manager of Engineering over both the rail & marine departments.

Bruce reflected that it was the most enjoyable period of his entire time at Gunderson. He and the shop people "hit it off" right from the beginning. Bruce was reluctant to take the plant job. He wanted to continue in sales and management and felt this would sidetrack his career. He agreed to take the job with the understanding he would be replaced as soon as the shop was humming again. He then went back to California, finished his vacation, came back to the plant and stayed in the shop for almost a year.

William R. Galbraith becomes Gunderson salesman

In October, 1966, needing someone to take over his sales work while he managed the shop, Bruce contacted William R. "Bill" Galbraith, who was at Boise Cascade in Chicago. Both Bill and Bruce had been with U. S. Steel Corp. as salesmen and were good friends. Bobby interviewed Bill for the job, liked him and offered him the job. Galbraith became a salesman in the Gunderson's Chicago office until January 1, 1967, when he transferred to the Front Avenue plant in Portland as Sales Manager. When Bruce finished his one year stint in the shop, he returned to the office in mid-1967 to become Vice President and General Manager.

Tragic end to Robert E. Gunderson's career

Bruce recalled some of Bob's traits, "He had all of the aptitudes. He had a great following, Paul Davies, Jim Hait, Ben Carter, (all FMC executives) all thought a great deal of him, he would go a long way." To condition Bobby, Al compared him with Bruce. He said Bobby was impetuous, and Bruce more considered in his actions. Bruce considered Al to be highly perceptive.

In January 1967, Bob Gunderson and a close friend, Thomas K. Sammons, took off from Portland airport in Sammons' new, twin-engined Piper Apache airplane for a trip combining business and pleasure. For Bob, it was a stop at San Francisco airport, a drive into the city for business calls on rail and barge customers, then, by plane, on to San Jose for a visit with FMC Corporate officials. After that, the two friends intended to fly to the Monterey Peninsula for some golf and to watch the Bing Crosby "clam-bake", a golf tourney featuring top golf professionals and celebrity amateurs. Bob's wife, Saundra planned to join Bob at Monterey.

After the stop-over in San Francisco, Sammons, the pilot, had filed a flight plan with San Francisco airport for departure to San Jose at 12:27 A. M., January 19, 1967. They had been warned of bad weather and against take-off. Minutes after take-off the pilot reported to Moffett Field that he was lost in a fog and one engine had stopped. The plane then attempted an emergency landing approach to International Airport's runway 28 but radar contact was lost near the San Mateo Bridge about 1:28 A. M. At low tide, searchers located the plane when a small portion of its tail was seen barely above the surface of the bay.

Both men had perished.

FMC notified Al, still President, in Hawaii, where he was vacationing with his wife, Jane. Al called Bruce and asked him to notify Saundra of the tragedy. When Bruce arrived at Bob's home to break the news, Saundra was all smiles, getting ready to go to Monterey to meet Bob. Bruce said, "Telling Bob's wife of the death was the hardest thing I've ever had to do, probably the worst day of my life."

Bob had taken the only copy of several cost documents with which he intended to negotiate some billings to Gunderson customers. These documents went down with him. But, according to John Hohler, Chief Engineer, Marine, said, "The customers saw to it that, we received every dollar that we had coming in spite of the loss of the documents."

Al's dreams for Bobby shattered

Bob's death was a tragic loss to his father. All of Al's dreams of his son's taking over the business were shattered. Bruce remembers that from that day on, Al was never the same. He went "completely to pieces", began leaning on alcohol and was never the same man. Bruce really missed Bob. He was a good friend.

FMC'S replacement for Bob Gunderson unacceptable to Al

Bruce recollects that FMC panicked. They knew Al wasn't doing well and "was a basket case." They didn't know Bruce too well. So they sent Cledo Brunetti, Ph.D., to Portland from San Jose to take over Bob's responsibilities. He was there only a few days. Unbeknown to Bruce, Al called Hubert Bird of FMC and told him to get rid of Brunetti or, "I'm resigning and so is Bruce Ward. You can have the plant!" Bruce got a call from Bird who told him, "I don't want you to do anything rash." Bruce asked him, "What makes you think so?" (that he would do something rash) Bird then explained the call with the admonition, "Don't do anything irrational."

Bruce then went to see Al and asked what was going on. Al explained the situation, that no one in the plant liked Brunetti, and that he (Al) wanted to make sure that Bruce was made General Manager. Bruce, a little sarcastic, said, "It was nice of you to tell me what you've done."

Ward's rise to the top job at Gunderson

In late February or early March, 1967, after Brunetti's removal, Al called a meeting of the board and appointed C. Bruce Ward Vice President and General Manager.

Bruce went on with the story, "Al was still President in July, 1967, when Hubert Bird came up (to Portland) and he and I and Moe (Tonkin, Al's attorney) met at the University Club. He wanted me to become President and wanted Al to retire. All of us agreed because his condition was getting more critical. We agreed that I would break the news– we cut a deal he would be on full salary to the end of 1967." Bruce broke the news to Al. At first, Al was shocked at the thought of being replaced, but then he was pleased about the salary offer, and happy that Bruce would get the job, which was the eventual plan anyway.

Al retired then in 1966. The front door lock at 4700 N.W. Front Avenue was removed from the door and mounted with the key on a beautifully finished plaque of walnut inscribed, "Front door handle, retired from 4700 N.W. Front Avenue after 25 years of faithful service, 1941-1966, to the custody of Al Gunderson December 23, 1966."

Bruce became President July 1, 1967.

Al and Bruce appointed Thad Stevens to take over as Plant Superintendent. Landregan became Manager of Engineering over both rail and marine activities. John Hohler was Chief Engineer of marine. Elliot B. Higgins, Jr. was hired as the Facilities Engineer. Leighton W. Johnson, Chief Engineer, asked for and was given a new responsibility, Consulting Engineer for the company.

Elliot B. Higgins account

The following written April 3, 1991 by Elliot B. Higgins, throws some light on his relationship to Bob Gunderson and his very brief term as Plant Superintendent:

"For some 6 months prior to July, 1966, I was retained as an independent Consulting Engineer for re-design of some railcars for Gunderson, one such was the detailing of a U. P. Gondola from riveted construction to welded.

"Then, R. E. Gunderson induced me to suspend private practice to serve as Staff Management Plant Engineer, relating to manufacturing facilities and a 5-year plan for plant expansion. Three months later I was advanced to Director of Engineering for all Portland activities: Plant, Rail, and Marine. About that time, I accompanied R. E. Gunderson on trip to Japan to study shipbuilding methods there.

"Following his tragic accidental death, corporate officers requested me to become Plant Superintendent involving supervision of all production workers – some 800 at the

time. In addition, about $2 million in plant expansion projects were managed and completed, including design and construction of the 600-foot long side launch ways, with overhead traveling gantry crane – both the first of their kind on West Coast, and both highly successful.

"Ron Schoenheit was my assistant most of that time. Zaronski-Tatone Engineers were consultants on structural details and Phillip Spaulding, Naval Architect of Seattle assisted in the basic concept of the ship-building ways.

"Right after the first side-launching, about the last of September 1968, I left Gunderson to become Director of Engineering for the various Schnitzer organizations. That was my position for the ensuing 21 years, until retirement October 2, 1989."

Higgins was Plant Superintendent for only a few weeks. He replaced Ward when Ward re-entered the front office as Vice President & General Manager.

Al Gunderson dies

Al was critically ill for most of the five years after stepping down from the company presidency. He died July 31, 1972. There is a separate profile of Al elsewhere in this history.

Shortly after FMC Corporation acquired Gunderson in 1965, Bob and his father and someone at FMC reasoned if Gunderson was to become a major carbuilder it had to have an Eastern plant which could compete with the ACF's, Pullmans, and the other major carbuilders.

Gunderson's Eastern carbuilding plant

In South Charleston, West Virginia, the FMC Corporation had a huge, army tank plant that was vacant. It had 100-foot wide bays and 100-ton capacity cranes. It was a vast layout. It was next door to ACF's plant in Huntington, West Virginia and not too far from Pullman's in Butler, PA.

With most railcar materials originating in the East, Gunderson overcame the $2,500 freight disadvantage of its Portland location and as a result, should have enjoyed a good share of the freight car business of some Eastern railroads. So, in about 1966, the Gunderson Car Plant of FMC, Charleston Division, came into being.

Originally, Gunderson people thought the Charleston Division was under the control of Portland, but once it got underway, Charleston's people began to operate independently.

Common gossip in the railcar business was that building tanks for the army was a lot different than building railroad cars. Railcar orders were sold in a fiercely competitive climate. Delivery had to be fast and prompt. Cars had to be designed with the least weight, yet strong enough to withstand the stress of payloads, tractive forces, the twisting and the vibrations endured by them. Unlike the Army tank business, work-in-process labor and materials weren't paid for until the cars were delivered.

According to a letter of March 26, 1989 from William R. Galbraith, Sales Manager of Gunderson during that period, he remembered, "There seemed to be little or no communication between the two plants and they hired Jack Earp and Fred Groff away from their respective companies. They formed the sales team and these two guys went out and sold several thousand covered hopper and gondola cars. They also took an order for some of the aluminum coal cars from Dow Chemical Corporation that had a lot of extrusions (extrusions are structural sections made of aluminum). When they tried to put those cars in the production line, the plant literally came to a stop. The plant got so far behind in their production that they finally had to succumb to customer pressure for

delivery of cars that they had orders for and started reassigning those orders to other car builders. (Covered hopper cars for the Missouri Pacific and the Union Pacific, and some ballast cars for the Rock Island Railroad). At one time the joke in the industry was that we were the best buyer of freight cars in the industry. I believe it was almost 2,000 cars placed with other car builders because South Charleston had so many problems."

Eastern carbuilding plant closed

In a few months they were having horrendous cost overruns, quality and design problem on cars delivered. The aluminum cars were a total disaster.

Early in the Eastern carbuilding experience, Groff had been instructed by Bob Gunderson to open a Chicago office, but Al was upset when he found out that the office was so lavish in its appointments and not done in the usual Gunderson austerity. Invoices for expensive furniture, file cabinets and other items arrived daily from Chicago, and Al brought them into my office, slammed them down on my desk and asked "What's this?" I said that I had not authorized them but, (correctly) guessed that they were Groff's purchases based on Bob's authorization of the office. Al snapped them up and returned to his office, intent on pursuing the matter with Bob.

When the Charleston operation came to a halt in about 1967, there was an order for 32, 130 ton aluminum covered hopper cars which had been designed by them. Galbraith said, "Parts were cut and put on the floor but the cars were never assembled. Virgil Hatfield and some of his people went to South Charleston, gathered up all the parts, brought them back to Portland, and we put the cars together. And, as you know, we thought it was a lousy design and we later had to put cushioning in the cars to keep them from falling apart! Another first for FMC - a cushioned covered hopper car!" ("Cushioning" is a system of hydraulic cylinders and springs installed in each end of a car. The system absorbs impact and traction forces that are generated when cars are slammed against each other in switching and during transit in a freight train.)

When the plant closed in about late 1967, Al called Earp and Groff and terminated them. Earp was eventually re-hired and worked in the Portland office as an assistant to Galbraith. Groff eventually became President of Standard Forge & Axle Co. in the Chicago area. He sold many thousands of axles to Gunderson in the ensuing years.

The Portland office was astounded on hearing that Charleston had ordered and taken delivery of over 1,000 cars-worth of railcar parts, valued in excess of $1 million, before they had yet delivered the first of their orders.

The end result was that it was left for the two purchasing departments, theirs and Portland's, to dispose of, or use in Portland construction the left-over car parts. This process took another two years.

Gunderson, Portland becomes more efficient

Though the idea of having an Eastern car plant had failed, the Portland plant managed to survive and each job became easier. Man-hours per car were reduced. Purchased parts cost less because more of them were produced locally rather than in the East. Many parts were being made in-house. Gunderson became a large volume buyer, built up clout with the railroads and trucking companies and could negotiate better freight rates. Truck carriers were anxious to haul the inbound materials and gave Gunderson attractive freight rates. The railroads recognized this and reduced their own rates.

In 1967, FMC Corporation switched Gunderson from the Ordnance Division to the Machinery Division.

Chapter 15

Plain Vanilla

"Plain Vanilla car" resulted from cost-cutting

When Ward became General Manager, he ordered an exhaustive search for all ways to lower the cost of making freight cars. Out of this drive came such box cars as the "Plain Vanilla", an all steel, welded, single sheath car with smooth interior walls and reinforcing posts welded to the exterior. This design also used the Gunderson built, corrugated or ribbed car ends, which saved about $400 to $500 per car on a car costing $16,000 to $17,000 at the time. These ends replaced the expensive "Dreadnaught" ends formerly furnished by Standard Railway & Equipment of Hammond, Ohio (Stanray.)

Early on, Leighton Johnson pioneered the use of corrugated steel plate for barge bulkheads but he said the process was not attractive because it was too difficult to fit and weld into place. Conversely, he said its use in freight car ends was practical because the corrugations were easier to fit and weld to the car's adjacent end framing. A set of ends was made up and it tested successfully. Stanray ends were very expensive because the steel plates they used had to be passed through several stages of furnace heating and forming operations before they were finished. Gunderson's ends were cold formed on the 1,500 ton press, which had been built and used for pressing corrugated drop doors for Gunderson's first railcar order, Union Pacific Railroad Gondolas. A forming grade of steel made it easier to bend. Part of the savings was in the cost of steel because the heavy steel was bought in Utah rather than Hammond Indiana.

Later, in October 1978, a $1 million, 2,500 ton capacity, Erie hydraulic press was purchased and installed in Bay 3 fabricating shop to press the ends. With this new press, box car production was increased.

Box-car ends made in-house, roof costs lowered

After failing in attempts to secure lower prices from Stanray, their marketing executives refused to believe that Gunderson could manufacture a satisfactory end. When tests proved them wrong and Gunderson went into production, Stanray's President, Jack Bergen, said he had underestimated Gunderson and had he known, he would have made them such an attractive offer that they couldn't have afforded to make the ends. They then offered packaged prices for roofs, ends and other Stanray parts to try to dissuade Gunderson from designing and producing box car roofs and making the ends. Finally they gave up on selling the ends but came through with a new roof design which cost so much less that the company couldn't turn it down. Instead of Gunderson having to caulk and rivet Stanray's 12 roof segments together to make the one-piece roof, they (Stanray) designed a roof whose segments were fastened together by a rolled lock seam. When the roof was received it was ready to install. With the new roof, several operations were eliminated and costs dropped again.

The company constantly searched for other ways to reduce freight costs and to put an end to disruptive, freight damages on its inbound finished components. The one-piece roof shipments would vibrate in transit and arrive with cracks in the steel. Freight car axles shipped in pallets would shift in transit and the machined surfaces would be damaged needing repair or replacement of the entire axle. Eventually these problems were minimized through the mutual efforts of suppliers, haulers and the buyer. One by one, more components were made in-house, reducing their costs continually.

Ward's evening, management get-togethers

Ward hosted several evening meetings during which shop and office management people would sit down together for a nice dinner then "get down to brass tacks". His accounting managers presented graphic charts showing monthly expenses and other normally confidential information. It was an unprecedented procedure. That way everyone could see and compare their estimated versus actual performance. These discussions were always enthusiastic, lively and productive. Lots of friendly wisecracking and heckling accompanied the serious business.

There was a message framed in a plaque on the wall just outside the door to Ward's office when he was Division President. It was entitled "Loyalty", by Elbert Hubbard, and read as follows:

"If - you work for a man, in heaven's name work for him; speak well of him and stand by the institution he represents.

"Remember - an ounce of loyalty is worth a pound of cleverness.

"If - you must growl, condemn, and eternally find fault, why - resign your position and when you are on the outside, damn to your heart's content - but as long as you are a part of the institution do not condemn it, if you do, the first high wind that comes along will blow you away, and probably you will never know why."

The list of persons loyal to the company is a long one. Not many got blown away. Those periodical forums provided a relief valve for those who were frustrated or dissatisfied with the way things were going.

Ward revives annual awards dinner

Although the Gunderson brothers had been very supportive of company picnics and sports activities there were no annual awards dinners in which employees with a long service were honored, until the one on March 6, 1964. This one, at the now defunct Aero Club, feted your author who had attained 25 years of service on February 1, 1963. It ended with an argument between the two brothers. It was to be the first "Annual" Awards Dinner but was not resumed again until November 17, 1967 when Ward, then President of Gunderson Inc. (FMC's name for its subsidiary,) reinstated the dinner and titled it "First Annual Service Award Banquet."

The November 1967 dinner feted old timers such as Al Gunderson with 40 years of service. 25 year, gold watch awards went to a "builders list" including James "Archie" Crews, Fritz Dummer, Joe Huserik, Lyle Hansen, Dorman Jackson, Leighton W. Johnson, Vern McGillivray, Louis Ripoli, Robert Snyder and George Taylor. Arriving on the 20 year scene were Bernard Adams, Oliver Brady, Robert Evans, Robert Garrett, Ellsworth J. Gedde, Peter Gourde, Jack Herron, Everett Hill, Michael T. Illias, Max Langford, Eddie Lundt, Charles Lynn, George Okesson, Bruno Postatny, Muriel Spear, Thad Stevens, Ray Thomas, Percy Wood and John Young.

After that, the dinner was held every year until FMC sold the division in 1985 to Ward and Greenbrier Leasing. They changed the name of the company back to Gunderson Inc. The last banquet held by FMC was on March 1, 1984 at the Benson Hotel and was the seventeenth one to take place. The banquet honorees were feted for service after five years and every five years thereafter. In the March 1984 party, Michael T. Illias, buyer of maintenance, repair and operating supplies was honored for his service of 40 years.

Fun at work–the Christmas turkeys

Though everyone was conscientious and hard working, during Ward's stewardship of the company, the atmosphere was so relaxed that there was always some funny incidents going on.

The company had a policy of giving all employees a frozen turkey at Christmas time. The employees looked forward to that. During a staff meeting, a discussion was held as to the feasibility of giving turkeys to the employees at the next Christmas time. Due to some particularly touchy union and management relations at the time, someone worried that, if the tradition was kept up, it would get included in the union contract. One person, Al Rotz, an industrial engineer, argued heatedly in favor of the turkey gifts.

A group of his associates decided that Rotz should not be disappointed. According to the plan, Anita Baird, a Gunderson buyer, bought a whole, eviscerated and plucked, headless chicken and a severed turkey head. Then she sewed the turkey head onto the chicken's body and this was presented to Rotz in the next meeting, just before Christmas. There were a lot of laughs. Rotz took his ribbing like a good sport.

Later on, Ken Leaver, Southern Pacific's Assistant Manager of Design Engineering, allowed Gunderson to make certain modifications in the construction of 500 box cars for his company. He kidded Leonard "Len" Kutch, Gunderson's Chief Rail Car Engineer at the time, "You owe me a turkey." Leaver was pleasantly surprised to find a live turkey awaiting him inside the first of the 500 cars starting in November, 1973.

In 1964, Kutch had graduated from Purdue University with an engineering degree. He joined Pullman Standard Company, a rail-car builder, to work in design development at its Michigan City and Hammond, Indiana facilities. Then, in 1968, he was hired at Gunderson as a railcar engineer, by Robert J. Landregan. He became Chief Rail Car Engineer during the period when Landregan was transferred to the shop as plant superintendent. Kutch left the company in about 1974.

A feeling that we had something special

In a letter of June 14, 1992, Kutch recalled his pleasure while working at Gunderson, "During my first stay at Gunderson, I was in charge of railcar engineering during the development of the covered hopper car. Leighton Johnson probably contributed the most to that program. During that time, railcar engineering also developed the box car end that so many builders have copied."

"I thoroughly enjoyed working with the people at Gunderson and always felt that there was something special between the team that made the system so efficient. Bruce Ward had a natural gift for motivating employees and made the hard work and long hours seem worth it."

"Good memories of Gunderson include: Working hard as a team to be successful as a company. The golf outings at Monterey, CA. The practical jokes and closeness of the team. The challenges that were pointed out by Bruce Ward and our ability to meet them."

In June, 1992, Kutch re-joined Gunderson Inc. as Senior Manufacturing Engineer, reporting to Edward N. "Ed" Brumley, Sr. Vice President Production & Manufacturing. Of the occasion, he said, "It is a pleasure to be back with Gunderson."

Torch & Stinger* replaces the *Gunner

The *Gunderson Gunner*, which was printed every second Thursday from January 28, 1943 to August 16, 1945, re-appeared with the same name December, 1952, and continued on a monthly basis until August 3, 1953, when printing was suspended. The newsletter re-appeared in late February, 1967 (cover missing), with a new name, the

Torch & Stinger. The new name was selected in late 1966 from among 80 suggestions submitted by employees. To the winner, Homer E. Lee, employee number 1042, the company owes its thanks for the title which so exemplified its trade style. The *Torch & Stinger* appeared monthly through January 1982 and then became a six time per-year paper beginning with the March/April 1982 issue. Hard times came again and it was suspended with the November/December, 1984 issue. In November 1987, the magazine reappeared under a new name, *Gunderson News* and is now being published quarterly.

Oil & gas exploration triggers barge and railcar business

The year 1969 signaled the approach of the intensive oil and gas exploration in Alaska. With its excellent fabrication facilities and three shipbuilding ways, Gunderson was positioned to participate in heavy barge construction in a big way. It built 9 barges for various customers while it was delivering 68 Assault Support Patrol Boats (ASPB's) to the United States Navy for use on the Mekong River and Delta in Viet Nam. It also produced 2,313 railroad cars, 1 car more than the previous record for the company in 1966. Box cars accounted for the majority of the cars built, with wood chip and ore concentrate cars running a distant second and third. Through 1969 the company had produced 10,927 cars of various kinds.

In 1969, W. R. "Bill" Tagmyer, Assistant Manager of Sales and Marine, said the shipping season to the North Slope, due to extreme ice conditions, would last approximately six weeks. Accordingly all barges being built by the company for the North Slope had to be off the ways and in use precisely when they were promised. Gunderson's ability to perform on time was a big factor in increased sales to barge customers.

Rapid job re-tooling needed

Precise delivery of barges and railcars depended on rapid changeover of jigs, fixtures and launching cradles. After a launching, the carpenters would send the L'IL TOOT out in the river with a long tow line to salvage as much undamaged timber and parts as possible from the cradle which carried the ship down the ways at about 20 miles per hour.

The L'IL TOOT's tow lines encircled the jumbled mass of debris ranging from 2" x 4"'s to 12" x 12"'s and towed it to shore where the carpenters salvaged the lumber that was intact as well as the damaged portions which they re-sawed or trimmed to smaller, usable dimensions.

Within hours of the launching the carpenters were erecting a new cradle suitable for the next barge's dimensions whose keel was awaiting its own birth.

Carpenter's key production ingredient

In 1960, Big Joe Huserik took over as Master Carpenter when beloved Charles "Charlie" Wahl passed away. Although Joe was still a young man when Charlie Wahl left, he was already an artist at sculpting and fastening timbers together for the ship cradles and various other woodwork structures. He had worked at Charlie's side for many years and had become a shipwright himself. Not only was he required to boss the building of launching cradles, cribbing, and jigs, when Gunderson began building railroad cars, he and his crew installed the wooden lining and flooring in and on box cars and flat cars. Such skilled craftsmen as his brother Louie Huserik, Joe Bolopue (Foreman,) T. Hand, L. Key, C. Lovall, Charles Lynn, Les Mares, C. Reimer, Bud Williams and W. Willy made Joe's work a lot easier. Lynn, in his own right, could have been a professional cabinet maker, having built from scratch and installed many of the

cabinets, desks, panels, doors and other finished woodwork in the offices. In retirement, Lynn continues his fine handiwork by marketing music boxes made in his own shop.

Timber recycled

Huserik was thrifty with wood. He used it over and over again. When a carload of steel or railcar parts arrived from the Midwest or East the material was usually cribbed or protected with hardwood timbers. It was a throwaway hardwood of a cheap species, yet it was hardwood. Joe gleaned each car of its cribbing and re-cut it into shipyard wedges for use in his launching cradles to keep the cradle timbers snug, tight and level. The shipyard benefited endlessly over the years from such recycling by Joe and others.

The carpenters were a kind and gentle lot. In the fall of 1969, they noticed one day that a little bird had taken up residence in the shop where there was light, and it was warm and windproof. They named the bird, "Henry". They fed the bird and gave it a mirror. The bird would watch itself in the mirror hour after hour. Finally they decided that the bird should be named "Henrietta", not "Henry". She passed away in early April of 1970.

Teaching a purchasing agent how to buy lumber

It took excellent suppliers for Gunderson to become successful. These were just as essential as good people. While the most attention has been given to the Gunderson people, a few supplier situations were so unusual I thought they should be brought to light.

During our first few years of building box cars and flatcars we learned purchasing of lumber "the hard way". Thankfully, we had Joe Huserik to help us phrase our purchase orders so that all details would be clear and precise.

This is just a sampling of the relations we had with our suppliers. There was a constant "battle of the forms" between us and our vendors. Their acknowledgments to our orders rarely agreed with our terms, but somehow we managed to avoid taking legal action in all but a few situations. "Purchasing and selling is a matter of give and take," one of our suppliers told us, "You give and we take."

Most of our flatcars and boxcars were decked with thick and heavy Douglas Fir decking. To prevent warping, shrinking and cracking, the decking was kiln-dried or air-dried to a given minimum moisture content before it could be laid down.

Other cars were decked with dried and laminated hardwood decking. Each lamination was 2-3/8" thick by 1" wide and it took 12 laminates to make a standard 12" wide piece or 8 laminates to make an 8" wide piece. The laminates were glued together with a strong, waterproof glue.

Desert sun shrinks, warps and cracks decking

One of our first runs of flat cars were fir-decked. The railroad customer's inspectors had passed the cars before they left our plant.

A few months later, when those cars passed through Arizona and New Mexico under the scorching sun, the decking shrunk, warped and cracked so badly that the railroad made a claim on us for repairs. They claimed that the lumber had not been properly dried. We faced a frightful back charge.

Our supplier of the decking was Cascade Pacific Lumber Company. Its president was John Helm, who, in our view, was the best lumber supplier in the business. He handled the claim directly with the railroad. It was settled "without prejudice" for $10,000, a bargain, considering the large number of cars in question. His company paid the bill.

It was ironical that Helm was placed in this position. He hadn't endeared himself to me on the occasion of our first acquaintance with each other.

Unauthorized entry

Prior to ever doing business with Helm, I had purchased fir flat-car decking from another company at a lower price than his.

Unbeknownst to me and without my permission, when we were applying his competitor's decking to the cars, he brought a Southern Pacific traffic executive into our plant to look at the decking. Expert lumberman that he was, John easily convinced the railroad man that much of the decking was inferior. In the end, the vendor was forced to replace a great many boards free, but not without disrupting our work. I soon forgave Helm for "going over my head". The two of us came to view it as a humorous situation in later years.

After using his services for the first time, I recognized his rare talent, and realized that we needed this lumber expert on our side. When it all boiled down to end results, his price was the total price and there was very little disruption due to inferior quality, workmanship or delivery. He never failed us. His warranty was rock solid.

Yellow Pine disaster

On one project for box cars, their inside lining had to be one inch by four inch tongue and groove, Douglas Fir, surfaced four sides for smoothness. The railroad's rigid specification for the car lining virtually amounted to cabinet work quality.

During that particular period, there was a severe demand for one inch fir of the almost clear grade that we needed, so much so, that neither Helm nor any other western fir supplier could fill the order in time.

So, a bright idea occurred to me: why not see if we could obtain Southern Yellow Pine from Georgia? I knew the Eastern car builders used it on Southern Pacific box cars. Southern Pacific wouldn't object, either. They would gain in freight revenue on the long haul of the pine all the way from the south to Portland. It turned out that the pine decking was available and the delivered price was acceptable. There was a buyer's market on pine in Georgia at the time.

Prior to actually buying the pine decking we sent Virgil Hatfield, Materials Manager, and Doyle Thomas, Senior Buyer, to the Del-Cook Lumber Company in Adel, Georgia to inspect representative samples of the car lining.

Hatfield and Thomas also viewed the supplier's operation to make sure he could deliver. They discussed the desired method of loading the lining with Del-Cook's people so that our crews could unload it most efficiently. Del-Cook's people even agreed to ship the lining in wide door box cars, or better still, in the all-door box cars owned by the Southern Railway System. Wide door box cars had doors that were much wider than the run-of-the-mill cars that were randomly used. The entire side of the all-door box cars could be opened up. Either of these two car types were especially suited for loading and unloading the lining. Everything looked like it would go as smoothly as syrup.

Del-Cook delivered! The first two carloads came in and the lining was excellent and the loading methods had been followed. But ensuing shipments arrived in box cars with small doors making unloading a horrendous task. No all-door cars were received.

The quality of the pine lining had fallen badly. Deliveries slowed down. We never found out what had happened. Their business must have improved "overnight". They may have been shipping their better lining to a "regular" customer who was putting a lot

of pressure on them due to a rush order. Or their source of logs may have let them down. In any case, we were getting the left-overs.

Finally, when Del-Cook had delivered all of the pine lining, it was about 25% unacceptable due to excess knots over permissible, excess sap and even cracking. With the expert aid of John Helm in culling, sorting and re-working the lot; and his advice in pursuing the claim on the vendor, we were able to avoid legal expense, and luckily came out whole.

John Helm knew the fabricated lumber business

John Helm, as we've already hinted before, was a leading authority in this business of selling lumber. The name, Cascade Pacific Lumber Company, implies lumber mills, but this was not the case. Helm's company was a brokerage. Helm had several lumber and plywood mills from whom to draw his materials. He had sources for machining and treating wood to precise specifications. And–he had a superb, technical mind which enabled him to translate our needs into the finished product.

Other lumber brokers who wanted our business, and there were many, insisted on quoting us on our work, but they never did understand the machining requirements. They lacked the expertise and resources to handle the machining of lumber and couldn't compete with Helm. Only a few others, including Niedermeyer-Martin Lumber Company, understood these requirements.

Machining of lumber is a special field of its own. Helm had a major source for lumber machining over in Portland's St. Johns area. On visiting this source's facilities, we found that they could size, notch, dapp, mortise, drill and even orient the outgoing, neat package into the sequence of our use. On top of that they could pressure treat lumber.

Battle of the forms with Helm

Helm had a rare sense of humor along with a "sharp needle" when things weren't exactly suited to his straight-forward style.

In September, 1964, he acknowledged a purchase order that was admittedly sharp in its legal wording. Southern Pacific's order for this particular lot of cars demanded a two-year warranty on all railcar parts, even the decking. We were simply passing on to our suppliers, that two-year warranty requirement.

Helm wrote a classic treatise on lumber. We quote excerpts below:

"We have your change order #D as requested by Southern Pacific. Herewith copy of same reluctantly, but we believe properly executed.

"We cannot help but comment on same. The writer has been in this crazy lumber business some 32 years. Probably the only reason for this is the fact (and it certainly cannot be money as attested by various mortgages and notes held by some of the better 3-ball institutions in this city) that almost every day brings something new and startling, and today brought something very much in this category"–A TWO YEAR WARRANTY ON COMMON FIR LUMBER.

"We can see how a manufacturer of steel, bearings, axles, wheels, draft and braking gear would be properly called upon to guarantee his product for 2 years. He can test in the laboratory, he can control his furnace mix, his temperatures, he can use X ray, microscopes, on pressure equipment he can test hydraulically, he can caliper, he can weigh, he can match, etc. He can spot check batches or shipments, or each piece.

"We in lumber cannot do this. Wood just grows and every single log is slightly different from the other. Therefore, all we can do is grade properly, cut carefully, size, frame, bore and treat to your exact specifications.

"Now wood is wood as all know. When exposed to weather it shrinks and it swells, it warps and it twists, it checks and it cracks. The degree of these depends on weather conditions to which it has previously been exposed and to those prevailing at any given moment, at a specific location. Therefore, every single piece of decking we will furnish will react differently at various times over the next two years and only the Lord knows what it will do - and when.

"It is, therefore, only because of our unbounded faith in HIM that we have this day put our seal on the attached document."

Helm's letter was dutifully passed on to our railroad customer as our conditional acceptance of the requested warranty. Countless laughs were generated by this letter whenever railroad industry people engaged in light conversation. There were no quality claims on that lumber.

Paulk no slouch at Gunderson-bashing

Jim Paulk of Del-Cook Lumber Company was no "slouch", either, when it came to literary Gunderson-bashing, Despite the agreements our people had made with his, in his letter of April 8, 1969, acknowledging our order for pine lining he poked:

"It seems as though your traffic department as well as your engineering department has no fear of protection since I am thoroughly convinced that you have the most fantastic legal department of any company I have ever seen issue a purchase order.

"Please express my respects to them and the envy I hold for them, if they can find anyone who would sign it. (the purchase order acceptance) Now if we may resort to simplicity, and indeed it is very simple to state and confirm what we have offered, and incidentally what you have indicated you wish to purchase: (He enumerates our specifications)

"Let us assure you that we intend to work toward satisfying your wishes in every practical way possible; however, if you will look over your purchase order.....you will find several conditions neither practical nor acceptable, for example: You not only have designated the type of equipment that this material should be shipped in – you have also indicated the size, location of doors and size of doors. You did, however, overlook mentioning if you had a preference of color that you would like these cars to be (green, red or yellow, etc.).

HELL, Mr. Lundquist, we can hardly get equipment of any description to ship anything, much less a staggered, double door, 50' box car with doors larger than the railroad indicates they have ever seen."

Then, as if he had been schooled by John Helm, he ended his letter by invoking a higher authority:

"This is contingent upon events beyond our control, acts of God, and lessor respectful acts, such as labor unions strikes, etc."

Sliding a quarter across the joints

In the construction of railcars, the woodwork was installed by the carpenters headed up by Joe Huserik and assisted by his brother Louie, Charlie Lynn, Joe Boloque, C.

Reimer, L. Keys, Bud Williams and others.

Freight car decking and lining was closely inspected by our railroad customers' inspectors. The carpenter work was also gone over "with a fine-toothed comb" by them.

One time, Huserik told of a railroad inspector refusing to approve several box car floors because a quarter (coin) could not be slid from board to board. Joe had to get a heavy duty sander and sand over each joint so that the quarter would freely slide across! After a firm appeal to the railroad, a compromise was reached as to installation and inspection.

Dispute over terms of payment

A particular lot of 12" glue laminated hardwood floor boards was purchased from Frampton Industries, Inc. of Columbus, Ohio. The delivery and quality was excellent. Don Frampton was their President. Like Helm, he was also caustic.

The problem this time was opposing versions as to when our payment was to be made. The amount was $57,000. Terms were net 30 days. The fine print on our purchase order read: "Invoices will be paid thirty days after receipt of the material on this order."

Frampton had signed our order acceptance, but in an accompanying letter, he had insisted on terms strictly net 30 days after shipment. We were stretching the money as far as we could so we were sticking to the terms of our purchase order.

Frampton wrote us a "burner" and some of his comments were excerpted below:

"Dear Benny:

"Your check for $57,000 arrived in proper fashion in keeping with your telegram of October 23, 1970. Needless to say, the money was promptly deposited and smiles were apparent all over the place (we had "caved in" to his demands). "...Many corporate money managers earn their bread and butter by careful attention to details such as this and hanging on to a supplier's voucher for an extra day or two becomes significant when today's interest costs are fully understood. It's great for you, but bad for the supplier.

What we are trying to say, Benny, ...when you pay net 30 days, let's have no nonsense about mailing the check on or before the 30th day. If we understand each other, then there can be no hard feelings."

Don knew that the letter was incisive, so in the last paragraph, he offered us a cash discount of 1/2% for payment in ten days, or, he said: "May we have an alternate request from you, or at least an opinion, as to whether a 1% discount cash discount would be attractive? We can be realistic with each other–how would you like to give us your feelings on the subject?"

On the balance of the order we chose the 1% discount and came out much better than we did on the former payment basis. His tack had changed from firm to soft in the same letter.

Bobby Gunderson mulls fabricating lumber in-house

At one time Bobby Gunderson was insisting that we start up our own lumber machining and fabricating shop. We asked John Helm for reasons why we shouldn't do this. Obviously, Helm was against it, but his arguments were so compelling, factual and honest that we changed Bobby's mind on that issue.

In most instances, before the lumber could be installed and fastened into a box car, it had to be machined to width and length with the necessary slots, holes, daps and bevels

so it could be fitted over the adjacent steel frames and bolted on. A tight, precise fit was needed because grain was often hauled in the cars. If there were any leaks or cracks, a substantial loss of grain could occur in the cars during transit; and the railroad could not only demand replacement of the lost grain but also require repairs to the leaky cars and other damages.

In a two page treatise, Helm enumerated the cost of machines; the prospect of buying lumber with the correct, economical gross sizes from which to machine; and the logistical problems involved. In a few words Bobby saw a thousand headaches and gave up the idea.

After that, Helm supplied nearly all of our fabricated lumber until the construction changed from lumber to steel. No one else could come close to his prices or knowledge of woodworking.

Railroad mergers benefited Gunderson

On March 2, 1970 Gunderson received a great piece of news for its railcar shop. The United States Supreme Court approved the merger of several railroads: the Great Northern (GN), The Northern Pacific (NP), The Chicago Burlington & Quincy (CB&Q), The Spokane Portland & Seattle (SP&S) and the Fort Worth & Denver (FW&D). The result was one big railroad named The Burlington Northern (BN). (Later, on November 2, 1980 the Saint Louis & San Francisco, "Frisco" also was merged into BN.) Since most orders for railcars were priced F.O.B. (free on board), (of a given railroad customer's), the tracks running past the Front Avenue plant not only made it F.O.B. the GN, NP, and SP&S; but also made it F.O.B. the CB&Q, FW&D and later the Frisco.

The Burlington Northern became a railroad with 125,000 cars versus the 43,000 owned by the original Great Northern, Northern Pacific and the Spokane, Portland & Seattle. Many of those cars were getting old and needed replacing with up-to-date models.

The good news was compounded when it was considered that about two carloads of suppliers' material was required for every railcar produced; and each railroad enjoyed the freight revenue on that inbound material. Three new railroads were added to that advantageous situation.

Railroad customer's converted Gunderson's shipments

The railroads jealously guarded the routing of Gunderson's tonnage over their lines. As a result, Gunderson's inbound freight revenue was much more attractive than the revenue of its competitors. When compared to that of a Chicago district carbuilder who was very close to the heavyweight steel and component sources, Gunderson's freight, with its vastly longer hauling distances, became a plum to the railroads. This freight revenue was strongly considered by the railroads when they made their decision as to where they bought their cars.

Under the same Supreme Court decision the Chicago, Milwaukee, St. Paul & Pacific Railroad, commonly known as "The Milwaukee Road", was awarded line rights into Portland over the Burlington's tracks! For the purpose of quoting prices to the Milwaukee, Front Avenue became "across the tracks" to that railroad. The rulings made Gunderson much more competitive with several more big railroads.

Despite these mergers some negative factors emerged. Shortly after the mergers took place, stringent economic measures were implemented by the surviving railroads. One was the ability to utilize their huge railcar fleet much more efficiently than the individual

companies had done before the mergers. The result was drastic cuts in the buying of new railcars.

Gunderson delivers first BN car

In 1970 when the Burlington-Northern (BN) merger was announced, Gunderson was in process of making 500 50-foot 70-ton double sheath box cars for the Spokane Portland & Seattle Railway Co., (SP&S). Ward wanted Gunderson to be the nation's first carbuilder to place the new BN logo on a new BN car. He called Lou Menk, President of BN, for permission. Menk agreed, but to do this it was necessary to take that first car out of the 500 that were in process for SP&S. Menk simply changed the customer's name from SP&S to BN on the last 200 cars of that order. Then Ward arranged with Bob Landregan, Rail Car Engineer, to secure the new logo from Lippencott & Margolies, the firm that designed the logo. The logo arrived in time for placement on the first ever new BN car.

On December 22, 1982, the Union Pacific Railroad Company acquired by merger the Missouri Pacific Railroad and the Western Pacific Railroad. By this time, however, Gunderson's hopes were not so high after their experience with the other merged companies. As it worked out, Union Pacific bought fewer cars than ever from Gunderson.

Railcar orders based on handshake

During the 1970's, Alan De Moss had taken over as Vice President of Purchasing of the Southern Pacific Railroad. Prior to that, Vernon C. Hedding had been in charge of S.P.'s railcar purchasing. De Moss and Ward had a fine business relationship going. It was based on mutual trust. Alan would place an order for 500 or 1,000 box cars after negotiating a price, many times by telephone, and would say to go ahead with production and the paper work to follow. Sometimes it would take several weeks or months for the formal purchase order to follow and the cars would be almost delivered, billed and paid for, but there was never a problem with this arrangement. Alan's word was good and orders were consummated with a handshake.

Ward and Galbraith had a similar relationship with the heads of other railroads. One time during 1968, the shop was finishing up its railcar backlog and was precariously close to the end with no new orders in sight. They contacted Great Northern Railway Company and told them of their plight, that it would be tough to have to close the shop and send home several hundred men. They convinced GN to give them an order for 100 Woodchip cars for immediate delivery! Then Ward put the heat on the purchasing department to obtain the materials in a hurry to produce the order without a production gap in the shop. The total order was produced within a little more than thirty working days! By that time, Southern Pacific wanted 500 more box cars. The order was placed and a sizable lay-off had been prevented.

FMC required long range plans of Gunderson

With FMC Corporation as its parent, it was necessary for the division management to present long range plans to top management either at corporate headquarters in Chicago or at Portland. Usually, Robert H. Malott, the Chairman and Chief Executive Officer, and members of his staff attended. These planning sessions were referred to as "dog and pony shows." Among the items on the agenda were long range (five year) sales forecasts, productivity improvement through better machinery, more in-house manufacture of components and expansion of plant facilities.

An enormous amount of individual effort went into this planning. There were many mini-sessions between division and corporate planners before the final meeting. Authorities from both offices debated the issues in order to render them down to rational, brief and essential form. The corporate experts then coached the division people on the best methods of presentation to the high authorities. Projectors, slides, graphics and other gimmicks were used to persuade passage of projects. Quite frequently, during the planning process, economic changes took place which negated the planning and it had to be done over.

Once the plans were ready for the final meeting with the chief executive and his staff, a Gunderson contingent journeyed to Chicago for their presentation. Sometimes, the chief executive's busy schedule caused him to be tardy at some of the sessions while all the high paid execs of both groups cooled their heels. Sometimes Malott was said to be merciless in his critique of the proposals or proposers. Nevertheless, the outcome of these meetings was positive and increased the division's ability to produce in greater amounts and at less cost.

The "Clark Kent"

After FMC took over Gunderson in 1965, and during the tanker years, the "new breed" of manufacturing engineers moved into the operation, the purchase of old, second hand equipment was frowned upon. If it could pay for itself within a specified time, counting tax credits, depreciation, and productivity, new equipment was bought.

And some beautiful machinery was bought. On July 18, 1973, the giant $1.1 million Clyde gantry-mounted whirley crane made its debut at the head of ways #4 by lifting a large ship's stern section weighing 170 tons. The crane, with a maximum lift capacity of 200 tons at the time, was the largest shipyard crane on the Pacific Coast. It enabled lifting of much larger ship sections from shore to ship. The larger pieces could be built on shore, under cover, avoiding hundreds of hours of work on the shipways, outside in the rough weather. The crane's first big job was the lifting of huge, modular hull sections for five oil tankers built by Gunderson for Chevron Shipping Company. (See Footnote 1)

The 246-foot high crane, built by Clyde Iron Works of Duluth, Minnesota, could make its heaviest lift, 200 tons, when its boom was at a 47-foot minimum radius. As the boom reached out to its maximum radius of 150 feet, the Clyde could still lift 75 tons. Yet, there was an extra 25 foot whip (smaller boom), out on the end of the main boom, which increased the crane's reach to 185 feet. This whip could pick up 25 tons! There was a chart for the crane which gave the various lift capacities at different radii. The crane hook on the main boom had a speed of 18 feet per minute, while the whip could travel at 173 feet per minute.

This twenty-story behemoth needed a strong foundation. The July, 1973 *Torch & Stinger* described it: "First, 458 wooden piling, 45 feet long, were driven to form the base. Then 1,200 yards of concrete were poured over 240,000 pounds of reinforcing steel, forming a solid surface on which the rails were mounted. This foundation had a mass of 550,000 pounds or a density of 300 pounds per cubic foot.

"Mobilized by 24 wheels," *Torch & Stinger* continued, "the crane rides on a track consisting of two rails, 37 feet apart by 630 feet long. This track allows the 710-ton crane to maneuver to all points along the tanker project's 650-foot length. The rails, made from the heaviest rail stock rolled in America, can support loads of 70 tons per wheel."

"The two men initially assigned to operate the whirley are Everett Storley and Clyde Johnson. Utilization of the crane is directed by Val Lesina, to meet the needs of the tanker construction, which is supervised by Ray Thomas, Marine Superintendent. The entire

crane project was coordinated by Robert J. Landregan, Plant Engineer at the time." Landregan later directed the expansion of the crane's capacity to 210 tons.

The crane was so huge it could be seen from several vantage points in Portland: looking westward across the Willamette River from Swan Island or from the river side of Willamette Boulevard as it skirts the bluff above Swan Island. Another favorite view of it can be seen by looking north along the railroad tracks at the crossing of N. W. 21st and Front Avenues. But it is not wise to terry there without watching for trains.

For several years the Clyde Whirley was nicknamed "Clark Kent", by Ward. The nickname had been given to Robert Mallot, Chairman and Chief Executive, in a Forbes Magazine article. Forbes characterized him as a Clark Kent type due to his high flying style in running FMC.

The engineers

Leighton W. Johnson had been Chief Engineer of the company since 1947, when L. S. Baier retired to his own business, and when Baier's replacement, Bill Shoemaker, left the company. During the time Robert Gunderson was active, Leighton felt his title went "somewhat in limbo". In about 1972, Leighton asked for and received the title, Consulting Engineer for all FMC engineering activities. John H. Hohler became Chief Marine Engineer.

There did seem to be a steady shifting of engineers in the late sixties and early seventies. After R. J. Landregan's term as Production Manager, he was transferred to head up both railcar and marine engineering. Later, in 1969, he became Chief Engineer, Railcar Engineering. He held this position until 1970, when a hiree of his, Leonard Kutch, replaced him and he (Landregan) served time as a Facilities Engineer. As mentioned earlier, Kutch participated with Leighton Johnson in the design of special railcars.

In 1974 however, Landregan replaced Kutch as Chief Rail Car Engineer and held that position until he retired in 1989.

Landregan ends brilliant career

Landregan joined Gunderson November 8, 1965 and retired December 31, 1988. His 24-year career had encompassed many profitable developments in railcar construction. Under his guidance, Gunderson railcars became the "Cadillac" of the industry. While at Gunderson, he oversaw the design and engineering of several new railcar concepts and the re-design of existing types – cars which could haul bigger loads while weighing less and lasting longer. Of particular significance were the cars for hauling containers that comprise the majority in most trains one sees presently.

He was a recognized expert in his field of railroad engineering. He contributed to the industry's advancement by serving on its professional boards and committees. He was a member of the National Railroad Historic Society. As mentioned elsewhere in this history, Landregan was an engineering graduate of Purdue University. Prior to joining Gunderson, he was a mechanical engineer with the Chicago Burlington and Quincy Railroad, (CB&Q). As mentioned earlier, his father had been a locomotive engineer with the same railroad, so his blood ran thick with railroad lore. His automobile license plates read, "CB&Q". In private life he found time to preside over the Rhododendron Society of Portland. He was fun to be with and a great kidder.

He was succeeded by Gary Kaleta.

Footnote

(1) For a description of the lifting of the Chevron Tanker modules, see Chapter 18, "The Gunderson Experience," by Virgil Hatfield.

Chapter 16

Booms and busts

Feast or famine

There were roller coaster booms and busts in Gunderson's business lines. It was either feast or famine.

During a bust, Gunderson's sales prices couldn't be set low enough to keep much of a backlog, competition was so keen. Sadly, many good and loyal people were laid off during those hard times. Those who priced the sales bids felt badly that they couldn't win enough work to support a steadier employment.

On the other hand, during business booms, everyone bought heavily, often much more than they needed. Collectively, the marine, rail and trucking industries clamored for a larger-than-normal share of the available supply, especially steel. They needed to expand their systems to handle the increased hauling business. That's when shortages occurred, there was not enough to go around. A buyer became a salesman hoping to sell a supplier on the merits of doing business with him rather than with a competitor.

Gunderson weathered eleven recessions

Gunderson weathered the storm through eleven business slumps between 1929 and 1982. The duration of these recessions ranged from 6 months, the shortest, between January 1980 to July 1980, to the cruel 43-month depression between August 1929 and March 1933. The jobless rate rose and Industrial Output fell during these downturns. During the Great Depression, the drop in output reached 53.4% and the jobless rate reached 24.9%!

The slump beginning in July 1981 and officially ending in November 1982 didn't really end for Gunderson until well into the late 1980's.

In 1979, seventeen railcar manufacturers built nearly 100,000 cars. The leading manufacturers were American Car & Foundry Co., Bethlehem Steel Corp., Pullman Standard Company, Thrall Car Manufacturing Company, Trinity Industries and the Marine and Rail & Equipment Division of FMC Corporation. (MRED, Successor to Gunderson) The other eleven builders specialized in specialty designed cars. All were very busy.

Freight car statistics

Each year, the Association of American Railroads published a booklet entitled, Railroad Facts, which included new freight cars built and rebuilds. Among other statistics, it also included the total number of freight cars built and in service. The issues of 1976, 1983, 1988 and 1991 were the source of the information below:

Year	New Cars Built	Cost of New Freight Car (Average)	Cars Rebuilt	Cars in Service
1960	57,047	Not available	1,275	1,965,486
1961	31,501	" "	2,521	1,905,268
1962	36,454	" "	3,268	1,850,688
1963	44,804	" "	3,295	1,814,193
1964	69,051	" "	13,936	1,796,264

1965	77,822	$ 15,448.00	11,825	1,800,962
1966	89,899	Not available	15,954	1,826,499
1967	82,828	" "	17,086	1,822,381
1968	55,964	" "	12,604	1,800,375
1969	68,717	" "	6,944	1,791,736
1970	66,185	17,163.00	9,255	1,784,181
1971	55,046	Not available	5,587	1,762,135
1972	47,322	" "	2,661	1,716,937
1973	58,634	" "	536	1,710,659
1974	66,798	" "	611	1,720,573
1975	72,392	27,777.00	1,953	1,723,605
1976	52,323	Not Available	1,307	1,699,027
1977	51,639	" "	2,178	1,666,533
1978	69,490	" "	1,334	1,652,774
1979	95,836	" "	882	1,700,310
1980	85,920	44,547.00	1,163	1,710,827
1981	44,901	41,747.00	1,100	1,672,565
1982	17,236	37,230.00	1,500	1,587,551
1983	5,772	38,191.00	nil	1,542,482
1984	12,396	33,278.00	nil	1,486,282
1985	12,080	36,645.00	nil	1,421,686
1986	11,508	35,626.00	70	1,339,453
1987	13,645	37,096.00	150	1,288,129
1988	22,524	40,032.00	263	1,288,941
1989	29,617	40,984.00	380	1,224,422
1990	32,063	43,782.00	5,706	1,212,261
1991	24,674	47,739.00	7,394	1,189,660
1992	25,761	50,616.00	7,630	1,173,136

Bottom falls out of carbuilding

The above chart shows a sharp drop in new car construction from the peak of 95,836 in 1979, to 5,772 in 1983 and around 12,000 for the years 1984 to 1987. It clearly explains why, in March, 1987, only four major carbuilders were left. Gunderson Inc. was one of them. The others were Trinity Industries, Inc. of Dallas, Texas, who acquired Pullman Standard Car Company's car operations; Thrall Car Manufacturing Co. of Chicago Heights, Illinois, and Bethlehem Steel Corporation of Johnstown, Pennsylvania.

It is interesting to note the evolution of average car costs. They escalated through the years until they peaked in 1980, at $44,547, then dropped steadily until 1984, when the average was $33,278. Then prices began gradually to rise again. The drop shows how lack of demand and competition affect the cost of a product.

Freight car re-building due for resurgence

It also can be seen from the chart that freight car re-building was due for a resurgence, when considering the low figures from 1972 on, especially those in 1983 through 1987.

Not only were less freight cars built and rebuilt, but the total fleet of cars owned by all railroads dropped from almost 2,000,000 in 1960 to 1,212,261 in 1990, a reduction of about three-quarters of a million cars.

Marine business falls off

In September, 1981, MRED's marine business had fallen off so badly, their marine engineering department shrank to just three Engineers. Terrance "Terry" Halpin, Chief Marine Engineer, had just two assistants left. They were Don Kiive, Senior Equipment Designer, and Tommy Lee, Associate Design Engineer. Later on, Tommy Lee transferred to the purchasing department as a Buyer. The September, 1981 issue of the *Torch & Stinger*, billed the group as "biggest little engineering department in FMC."

At that time there were about 250 people in the barge yard. The marine business accounted for 25% of MRED's business. Barge jobs ran 1,000 to 5,000 tons each, but the three engineers had so much experience amongst them, they could handle all the details of piping, machinery, painting, electrical work and outfitting.

Five years earlier, during the Chevron Tanker years, Halpin's department needed 64 engineering people to handle the work.

Almost eleven years later, August 13, 1992, Gunderson Inc.'s organization chart for marine engineering still showed only two employees, Halpin and Kiive, as the total department. Barge construction was still slow in 1992 at the time of this writing. However, on April 30, 1992, L. Clark Wood, President of Gunderson told *The Oregonian*, "The timing may be right to get back into the shipbuilding business on expectations that demand will increase for double-hulled vessels as a result of the Oil Pollution Act of 1990."

In March of 1987, *The Oregonian* attributed the steep decline in barge and shipbuilding to lower world oil prices and the suspension of oil field exploration efforts in Alaska.

Carbuilding boom causes supply shortages

1978, however, was a boom year for carbuilding. Gunderson had a backlog of thousands of cars but didn't have sufficient supplies arriving in time to maintain the needed pace of construction.

Freight car truck castings, (frames and bolsters), which held the car's axles and wheels in place and formed the undercarriage of the car, were very scarce. The nation's foundries were booked far beyond their capacity. Gunderson couldn't secure enough castings to fulfill its order book for the three or four years ahead.

New casting sources sought–"Early bird catches the worm"

About that time Joseph Duffy and Robert Waite, Union Spring Company sales representatives, made a sales call on the company's Manager of Purchasing. They sold freight car truck springs. The conversation centered around shortages of freight car parts, particularly freight car trucks. By a very happy coincidence, Waite mentioned a conversation, the day before, with an acquaintance of his at Dofasco, a steel foundry near Toronto, Canada. His friend told him the Canadian railroads had delayed some carbuilding programs and that they (Dofasco) might have some open capacity. Waite also assumed the other Canadian maker of truck castings, Canadian Steel Works, had received a similar slow-down.

The following narration is the author's:

"I vividly remember the anxiety of the situation in which I found myself. There were sleepless nights. We had that enormous backlog of cars; where were the parts to build them going to come from? My reputation as a persuasive buyer was at stake; I had to find a solution. Here is how I recall solving the riddle:

"In desperation, I arose the next morning at 5:00 A.M. Portland time. I telephoned and reached Dofasco's Sales Manager just as he was arriving for work. Yes, they did have some open capacity. Yes, they knew of MRED. Their price was higher but yes, they would accept an order from us. I placed an order. Another phone call to Canadian Steel Works a few minutes later yielded another order of frames and bolsters. Even though the Canadian prices were ten percent higher than domestic, I decided to buy the castings and worry about the price later. Under most railcar contracts, price increases were passed along to the customer. If we hadn't taken the space, someone else would. Besides, we were still very short of fulfilling our casting needs."

Off-shore source's explored

"I looked further abroad for more frames and bolsters. Foundries in Brazil, France, Great Britain, Japan, Mexico, South Africa and Spain were contacted. Their castings were approved for use in America, but all of these foundries needed a license to make and sell the castings in the United States. Two United States foundries controlled those licenses. It was a case of locating a foreign foundry that could provide a quality product, that could be trusted to deliver; and that could obtain the license to deliver to the U. S. For weeks, it was a case of "dog in the manger"–the two domestic foundries stalled and were not willing to grant the licenses, yet their own capacities were badly oversold.

"Finally a connection was made with Cobrasma, a foundry in San Paulo, Brazil. Licensing was finally approved. 1,000 cars-worth (carsets) of the castings were ordered from Cobrasma. This still left us short of our requirements to fill the backlog. Doyle Thomas, Purchasing Agent at the time, was sent to San Paulo to visit the foundry, look at their quality, make sure they could produce and coordinate the import of the castings."

Perilous contract with Scullin steel

"As the casting shortage intensified, a major supplier, Scullin Steel Company of St. Louis, Missouri, took advantage of the situation in a unique, but cunning manner. On the premise of investing large sums for plant modernization and to ensure a steady cash flow, they offered their castings on a "take or pay" basis. This meant any orders to them were non-cancelable and any unshipped castings had to be paid for, just as if they had been shipped. To make matters worse, they increased their prices by more than 15% percent or about $500 per car's-worth. This action now made the Canadian purchases a bargain. Scullin imposed a further condition – that orders would only be accepted if they covered a pre-set, monthly quota over a three year period, no less. Making commitments for freight car parts that far in advance under such stringent legal conditions was unthinkable, holding one to it was onerous.

"We needed the castings desperately. In a decision reached amongst several of us managers including John A. Carroll, Jr., President, we "caved in" to Scullin and bought 100 carsets of castings per month for three years. The time term seemed conservative, we were so sure that our business would remain at a high level."

Recession triggers order cancellations

"Just when these commitments with the foundries in Canada, Brazil and Scullin began to pay off, enabling us to complete 6,027 cars in 1979, our biggest year, the first of two recessions began in January 1980. Nearly all of our railcar customers canceled most of their car orders with us. Most of our backlog dwindled away. Suddenly we had more castings than we needed.

"For cars that were to be built in 1980, 1981 and 1982 we received cancellations of over 11,000 cars.

"In a recession, we believe the railroad industry is one of the most sensitive to economic change. Freight hauling stops suddenly. Overnight, the railroads have a surplus of cars, reduced revenue, and can't spend money for new cars when they don't need them. During the worst part of the recession, over one million cars lay idle throughout the country."

Private car owners hurt

"Other complications arose. When the major railroads needed cars, they used their own rather than the cars owned by leasing companies. Their were thousands of idle cars, privately owned, stored on the sidings of the railroads. Storage charges were increased and storage privileges became scarce. Suddenly, ownership of cars by leasing companies lost its luster."

Scullin forces MRED to take or pay

"In turn, we had to cancel most of our orders for supplies. It was too late for some orders because they were already on the way. Cobrasma had shipped all 1,000 carsets.

"Scullin stopped production but invoked the "pay" part of the "take or pay" clause in the contract.

"After we failed for several months to fulfill our contract with the necessary castings orders, Scullin became adamant. I offered, without success, many alternatives for solution of the problem. They refused delivery postponement, even though the castings that we did release arrived late and were fraught with defects and poor quality.

"They sued us under Missouri law in St. Louis, the location of their foundry. The "pay" penalty had accumulated to about $5 million, including punitive damages.

"After several months of negotiations between John A Carroll, Jr., MRED's President, and Scullin's president, they made an out-of-court settlement of over $900,000. Carroll cut MRED's losses by over $4 million."

Scullin closes

"Soon, Scullin closed its foundry. Despite their enormous investment to modernize the foundry, their leaders failed to increase production and their quality steadily went down hill. For eighteen years, in good faith, we gave Scullin a good share of our casting business. But that relationship ended with the law suit and the closing of the foundry.

"The castings from Cobrasma were generally of high quality. With some modifications, we eventually used all of them."

Railroads in buyer's market

"During the recession, the market became a "buyer's market". The railroads refused to pay the escalation for the castings and we weren't able to pass it all through as we had presumed we would in the beginning.

"There were similar shortages of freight car axles, bearings, brakes, couplers, springs and several other components, but none were as severe as the casting scarcity.

There were no other legal hassles during the cancellation period. At least it enabled MRED to find out who its best and most loyal suppliers were."

Record carbuilding years for MRED

In 1978, a new record was established when 5,004 cars were produced, surpassing the previous record set in 1972 when 3,333 were built. But that record was eclipsed again in 1979. MRED garnered enough supplies to produce 6,027 cars.

As he had done so for the 1978 record, during advance planning for 1979, Philip Lively, Plant Manager, calculated the plant was now capable of making over 6,000 cars. Purchasing committed the necessary material. William R. Galbraith said he could sell the car's and did. The material was scrounged up, bought, expedited and arrived on time.

MRED adds 23 acres

On July 5, 1979, MRED acquired the 23 acre Schnitzer property next-door to the South providing the key to larger capacity. The purchase increased annual capacity by 35% over the estimated 5,000 car capacity which resulted from the company's previous 1977 expansion. The new land buy increased the area of the facility from 75 to 98 acres. The new property provided much additional rail trackage and building space for processing and storage of cars.

The Schnitzer property had been a scrap processing yard. Scrap steel, copper, brass and other metals came from everywhere including ships they dismantled, squashed automobiles and from hundreds of small scrap collectors. The steel was compressed into cubes of several hundreds pounds each and loaded into ships for export or onto railcars destined to nearby steel rolling mills.

Before Schnitzer vacated the property and turned it over to us, they hauled away their machinery and every stick of scrap in sight. Yet, I was approached by a small scrap dealer who wanted to "glean" the property for the scrap which Schnitzer overlooked. He would pay us so much per ton, scale weight, for the privilege. In walking over the ground with him, all that was left was slivers and fragments but we made a deal anyway. Yet, I was amazed when the dealer found and hauled away several truckloads, that his men had unearthered with rakes, shovels and magnets.

Gunderson's and MRED'S carbuilding history

A tabulation of car production through the end of 1989 by the various Gunderson companies follows:

1960	153	1970	1,791	1980	4,801
1961	47	1971	2,357	1981	1,593
1962	0	1972	3,333	1982	25
1963	982	1973	3,164	1983	304
1964	1,121	1974	2,492	1984	555
1965	1,824	1975	3,225	1985	1,410
1966	2,312	1976	3,041	1986	1,790
1967	1,251	1977	3,127	1987	2,027
1968	923	1978	5,004	1988	1,807
1969	2,313	1979	6,027	1989	2,305
Decade	10,926	Decade	33,561	Decade	16,617
Total after 2nd decade			44,487		
3rd decade			61,104		

3,446 cars and platforms were produced in 1990 and 3,260 were built in 1991.

The heavy carbuilding years of 1976 through 1980 were brought on by: (a) unusually heavy demand for railcars in a booming economy,(b) a shortage of railcars because, for years, the railroads allowed their fleets to dwindle or depreciate, as a result, they had to rebuild their car stocks in a hurry and, (c) the financial incentives available for those who bought new cars for the purpose of leasing them.

Good reasons to buy and lease railcars

Lessors of railcars had a five-pronged incentive to buy and lease the cars. (1) Big demand for boxcars and hopper cars. (2) A 10% tax credit. Car buyers who leased their cars were entitled under the tax laws to deduct 10% of the cost of the car from their income tax as a tax credit. (3) Accelerated depreciation. Car owners were given as few as seven years in which to depreciate the cars. (4) They could deduct loan interest from their income tax. (5) They could deduct maintenance and other expenses from their income tax. The use of debt leverage to acquire the railcars, combined with tax incentives of the Investment Tax Credit and accelerated depreciation, allowed investors to realize substantial positive cash flows. Considering a 50% federal tax rate in effect at the time, two factors alone–the 10% tax credit and depreciation–yielded a positive cash flow even before collecting rent.

Customer mix and color schemes

The railcar job listing for that period of time shows there were 82 direct customers, including the major railroads. Major leasing companies such as Brae Corporation, Greenbrier Leasing, Itel Corporation, Rex Railways, Inc., and XTRA, broke their purchases down into leases to 59 other small railroads or lessees throughout the country.

Each individual lot of cars had to be painted and name stencils made to suit the individual lessee. Every color of the rainbow and shades in between were used. There were hundreds of different car and weight numbers to stencil on the cars. The paint shop had to hussle to keep everything straight and to keep up with production. The names of the lessees ranged from Amador Central Railroad Co. and Arkansas & Louisiana Missouri Railway Co. to Yancey R. R. Co. and the Yreka Western Railroad Co. There was an infinite variety of box and hopper car sizes and accessories. Each company had its own set of wants.

Re-scheduling was a pain

The sales department, following the dictates of its customers, constantly inserted add-ons into the backlog. They reset delivery of some jobs sooner and others later. The purchasing department had to make sure the appropriate component changes were made to keep current with the back log. Production got the worst of it. They had to keep track of all of the different orders, make sure the correct specialties were applied, use the right paint schemes and deliver the cars when called for. Each time an order was re-scheduled, Sid Pidgeon, Scheduler, put the changes into a computer and ground out new requirement dates for all operations. From these charts, Allen Perry, Purchasing Manager, instructed his buyers to change their inbound material needs. Robert Murphy, Purchasing Agent and Material Expediter, handled the schedule changes with the suppliers and saw to it that the fastest, yet cheapest in-bound freight carriers were used. Mike Stuart, Production Expediter, had his hands full making ends meet given the closeness of material arrival and car deliveries.

Railcars christened with champagne

In these writings, much has been said about the christening of ships with champagne. Even box cars were sometimes christened by breaking a bottle of champagne over the coupler of a car.

One such occasion in September 1978 was the sample car of a 200 car order from Itel Corporation, Lessor to the East Camden and Highland Railroad, based in East Camden, Arkansas. Don E. Ghent, President of the railroad, performed the honors.

Again, in October 1978, Mrs. Willis Kyle, wife of the owner of the Yreka Western Railroad Company and the Oregon Pacific & Eastern Railroad, christened the first of 200 cars they leased from Brae Corporation, who bought the cars.

Several such "launchings" took place.

Railcars consume much welding material

When 5,004 and 6,027 cars are produced in a shop in any one year, thousands of feet of welding must be accomplished.

The art of welding was explained to *Torch & Stinger* readers in the May 1978 issue. Harold Knab, head of the welding department at MRED, whose entire career has been in welding, supplied an explanation and history of the process. He was assisted in his department by Neil Shannon, Gary Luck, Leroy Butcher and Chuck Oswald. They ran a welding school not only for those just beginning in the craft, but also for those experienced welders who wanted to improve their knowledge and skills. In a company such as MRED, welders had to qualify under tests required by the American Bureau of Shipping and United States Coast Guard for marine work, and by the American Association of Railroads and American Welding Society for railcar construction. A brief version of Knab's treatice on welding follows:

Welding defined

The technique of welding or joining two pieces of metal together was practiced for centuries by blacksmiths. Nearly molten metals were hammered together until they fused. In 1801, Sir Humphrey Davy of England found "that an electric arc (continuous spark)could be created with a high-voltage electric circuit, by placing the positive and negative poles near each other." In 1887, a Russian, Nikolas deBanardos, won the first patent on the arc-welding process. About that time, resistance and oxyacetylene welding (using the flame from a mixture of oxygen and acetylene) evolved and were introduced to industry. The article said, "Commercial arc welding came to the United States in 1907. World War I brought a major increase in the use of arc welding, when it was used in shipbuilding and repair." The article continued, "Arc welding involves the application of intense heat at the joint between two pieces of metal, causing the two parts to melt and intermix–either directly or with an intermediate molten filler metal. Upon cooling and solidification, a metallurgical bond results. The final weld at the joint exhibits the same strength properties as the metal of the parts."

Many welding techniques used at MRED

Knab said, "We use every construction process up to and just short of aerospace requirements. We employ manual (hand guided and fed), semiautomatic (hand guided), and automatic (all machine run) welding at this division. Of a total of thirty-four welding processes in the industry, our division employs Gas Metal Arc Welding, Flux Cored Arc Welding, Submerged Arc Welding and Manual Shielded Metal arc or Stick Welding. We

also employ two processes for removing metal; oxyacetylene cutting (burning) and carbon arc gouging (scarfing)."

Throughout its history, Gunderson, (MRED), has been known for its excellence in welding. One of the reasons: it was blessed with superb welders and superior welding engineers, such as Gene LeDoux, Moon Mullins, Knab and Phil Seaman. They kept current with the best equipment and latest practices.

Welders deposited 2,500 miles of wire per month

At MRED in 1978, there were 53 welders in the marine division and 375 in the rail side. These represented 37% of the work force of 1,150. The welders were depositing 2,500 miles of weld wire per month. 900 welding machines, hundreds of welding stingers, and thousands of feet of welding cable were being used and had to be maintained. Troubles had to be diagnosed and solved. Enormous quantities of welding wire and rod were needed to satisfy the appetite of Gunderson's welders. Repair parts for the machines and appliances were often in short supply and had to be expedited constantly.

Michael T. Illias, Senior Buyer, who retired in 1992 after 48 years with the various Gunderson companies, provided a summary of welding electrodes, welding wire and flux which he bought during the year 1979. The list of 30 line items totaled over 3 million pounds and cost over $2 million. Cored welding wire in coils and on spools constituted 32% of the weight and 44% of the value of these products. Dual shield welding wire in coils comprised 25% of the weight and 24% of the value. Hard welding wire was next at 23% of the weight and 16% of the value. 26 tons of flux was purchased. 31 tons of copper coated carbons for gouging or scarfing valued at $10,000 were used.

1979 A big year for steel purchasing

One might ask, "If all of those welding rods and wires were bought, it must have taken a lot of steel to be welded to use it all up." It certainly did. 121,000 tons of steel were purchased in 1979. 34 % of the steel used was sheet and strip, 29% plate, 28% structural and light shapes, 8% bars, and 1% pipe and tubing. All but 7% of the steel came direct from rolling mills. The 7%, which was usually a few odd pieces of steel at a time, came from jobbers and warehouses.

To facilitate speedier welding of large structures, huge gantries on wheels were built and equipped with several welding heads capable of laying down a continuous weld bead. The heads were fed with welding wire from spools containing hundreds of feet. The gantries straddled the work and traveled on rails for the entire length of the structure to be welded. The gantries were used to build railcar sides, underframes, ship bulkheads and frames for many other applications.

Gunderson "bull wheel" remains valuable tool

Another valuable welding tool was a positioning device or, as it was originally called, a 'bull wheel.'" This fixture or jig suspended the work between two rotating ends and permitted the underframe or even a boat hull to be rotated to allow the welding to be done in a down hand position. Practically all overhead or vertical welding on new production was minimized if not eliminated with the use of these turning jigs.

The *Torch & Stinger*

The company's publication, *Torch & Stinger*, took its name from the burning torch and welding stinger. Quality welding and burning were vital pillars of Gunderson's

success in steel construction.

The suppliers of welding and burning equipment provided guidance along with reliable equipment. Air Reduction Co., Lincoln Electric Co. and Linde Air Products were the largest, and longest term suppliers of welding equiment and electrodes. They were generous with technical support and training in the use of their equipment.

The burner's scraps

Much of the steel used in the construction of railcars and barges was burned out of steel plate from templates. These templates guided the burning torch head through geometrical paths so that the resulting piece fitted its mates in the construction process. The resulting "fall-off" or remaining, unwanted part of the steel plate fell into a bin underneath the burning table and was transferred to a scrap bin for hauling away to the scrap yard.

But many of those scraps of steel had an unusual and abstract design, of no functional use, but beautiful to see. Featured in the November 1978 issue of *Torch & Stinger*, a Vietnamese refugee, Sau Cong Do, a welder in MRED's center sill shop, collected several hundred pieces of scrap metal and created a welded masterpiece for the main entrance of the Job Corps Training Center in East Portland while he was there learning how to weld. His creation was a fierce, awesome, yet graceful steel dragon.

I often thought, but failed to follow through, of preserving some of the art "carvings" of Gunderson's burners. Had some of the pieces been welded together in an abstract form, who knows what fame would have ensued?

CM-100 obedient slave

The Linde CM-100 Numerically Controlled (Computerized) burning machine would burn, obediently, any shape its operator ordered from a template. Even the nine-inch thick steel hinges which connected the two big "leaves" or hull halves for Howard Hinsdale's 3,000 cubic-yard bottom dump barges, were burned from plate on the machine. The fourteen hinges per ship (seven for each end) were so husky, and acting like hinges on a door in a house, they could open the barge's "leaves" to make it bottomless, so that rocks weighing thirty tons each could dump onto the ocean floor to create a breakwater. These hinges had a pleasing, aesthetic effect on the viewer. Ken Pugh, the machine's operator, told the *Torch & Stinger* March 1977," "The CM-100 burned all the hinges easily, making a precise cut 'smooth as a baby's bottom'." "The hinges were also shown in the June 1977 issue. One can see the detail of how the scow's halves were opened and closed, hydraulically.

Large maintenance force required

In May 1979, there was a force of 57 maintenance people to service and keep all the machines running. It was necessary to keep precise records and parts lists for all machines. Everett Hill, and his much smaller staff performed the service for years. They were on call any hour of the day, night, or weekend. It was especially rough on them during the winter at the onset of a freeze. They would have to drop what they were doing, go to the plant and shut off all the water lines or protect them against freezing so that the plant would not be crippled for the next shift. This applied to machinery breakdowns as well. There were hundreds of electric motors, controls, gaskets, gears and shafts that could break and these maintenance people knew how to fix them in a hurry. Parts were being flown in from all over the country to keep the machines turning. Sometimes a part couldn't be bought so a copy of it was made in Fritz Dummer's machine shop.

The early years of the 1980's proved almost fatal to MRED. Their challenges to stay alive were almost as great as those of Gunderson during its financial crisis in the late 1930's. When the bottom of both the marine and railcar market fell out, FMC Corporation found difficulty in justifying MRED's continued existence as a division. We went "from feast to famine".

— Legacy of the Steel Men —

Chapter 17

Two of Gunderson's prime movers

Charles "Chuck" Anderson began his career at Gunderson in 1953 right after he got out of the army. His first job was boilermaker helper. He started as Rail Production Superintendent for Gunderson Inc. in about 1960.

Ed Brumley hired on at Gunderson in 1957. His first job was fitting and welding. During the intervening years, Ed served in a supervisory capacity in manufacturing of all types of steel fabrication including marine equipment. In July, 1989, Ed was appointed Vice President Production and Manufacturing of Gunderson Inc.

Plant still small in the 50's

The plant was still quite small when Chuck began his career at Gunderson. It had about 11 acres with about 6 under cover. (See Footnote 1)

But by 1956 it had grown somewhat.

In Al Gunderson's letter of September 12, 1956, addressed to a steel company sales executive seeking help on some additional steel supplies, he said, "We have recently acquired more river front property to where we have a total of 40 acres. As you probably know we have in excess of 350,000 square feet of floor space under cover serviced with cranes, and at this time we are in the process of installing a new set of ship ways." (Ways #2) Al's square footage under cover equated to 8.03 acres.

By 1957, when Ed arrived on the scene, Gunderson had completed three fabricating bays 60 feet wide by 523 feet long. The three bays ran perpendicular to the original building at 4700 N. W. Front Avenue which ran toward the Willamette River.

In the late 1950's, Gunderson was building railcar underframes in Bay I while building bridges, barges and tug sub-assemblies, pipelines, and tanks, in Bay II. Bay III was used for steel storage, burning and fabricating. This was before building complete railcars became Gunderson's main business.

According to Chuck and Ed, our own carpenters constructed these bays. They fabricated all of the timbers and frame work in those bays except the roof trusses which were purchased.

As of November 19, 1991, Gunderson Inc.'s facilities cover 75 acres with 750,000 square feet, 17.22 acres, covered manufacturing space.

So these two men worked on a variety of both marine and industrial projects where they gathered their diversified backgrounds.

Chuck's brother, Walt Anderson, also began a 32 year career at Gunderson in 1952 and eventually became Assistant Manager of Marine Operations holding that position until he retired in February 1983. Chuck's son, Charles, Jr. (another "Chuck") is also with the company now and is a foreman. So the Anderson family has been well represented at Gunderson.

The Salt Lake Navy

One big project during 1956 and 1957 was the delivery of eight tugboats that Gunderson built for Morrison-Knudsen (MK). They were built complete in the shipyard,

then "slit down the middle like a melon," and shipped on railroad flat cars to Little Valley, Utah near Promontory Point on the Great Salt Lake.

The tugs were built to tow barges made by Hammond Iron Works of nearby Provo, Utah. The barges hauled fill material to make a dry-land causeway across the 30-mile lake, a project which took 3-1/2 years for M-K. The railroad was Southern Pacific.

The tugs were reassembled by Gunderson men at the edge of Great Salt Lake. After being launched and tested, the tugs were turned over to Morrison-Knudsen.

Three years later, in early 1961, a crew consisting of Chuck, Jake Burris, foreman; Bill Kneeps, Machinist; and Ward "Smitty" Smith, an electrician, went to Promontory Point and hauled two of the tugs out of the lake, slit them up "like melons" and shipped them back to Gunderson where Ed put them back together for J. Ray McDermott Co. for use in Alaska waters.

The mean guys

Ed told about the time, in his early career when he was assigned by his foreman to go to Fritz Dummer's machine shop and get a part made in a hurry. Fritz had a lot of parts ahead of Ed's but said he would get to it as soon as he could.

Two or three days went by so Ed went back to Fritz and asked if the part was ready. No, it wasn't. A few days later Ed expedited the part again. Still not ready. Being an aggressive guy, Ed said to Fritz, "Why don't you let me make the part?" With that, Ed related, "Fritz kicked me out of his shop and told me not to come back. He'd let me know when the part was ready."

Ed and Chuck remember how mean and tough some of the foremen like Fritz were. "They gave no mercy to a young guy in the shop." The two listed Eddie Lundt, burning alley; Dorman Jackson, plate shop; Ray Thomas, marine yard; Joe Huserik, carpenters; Ellsworth Gedde, marine; Johnny Young, riggers and material handling; and George Okeson, welding, as the tough ones to work for. All were foreman to general foremen. All of these men had arrived the hard way too. These men were all leaders and knew how to manage, mold character and get things done.

Dorman Jackson had received his baptism under Adolph Strid and Frank Stump at the Linnton plant plate shop. I can attest to Strid's gruffness when one wasn't getting the main idea.

Huserik even admitted that he was mean when, in January 1977, the *Torch & Stinger* asked him, "What is your New Year's resolution for 1977?" Joe's reply was, "I suppose that I could say that I am going to try to be even meaner next year than I was in 1976. Instead I will say that I am going to try to do a better job this year than last."

Ray Thomas said, "Sometimes you had to be mean to get the job done right the first time."

Brumley himself was no piker at reading out his help. In 1963, Steve Howe, son of Warren L. Howe, Jr. and Rod Lundquist, son of the history's author, both boilermaker's helpers, were working together across Front Street in the Quonset Building sweeping the floor. They got a little bored and were feigning a sword fight with their brooms, when Brumley found them. He said, "Where the hell have you been? I've been looking all over for you. Finish here and get your (censored) across the street. I've got another job for you (censored)."

The diver

The conversation with Chuck and Ed turned to colorful characters who worked for Gunderson and some of their experiences.

One was George Okeson. Iva E. Okeson, in a letter relating some of her late husband's experiences, said, "George received many calls day or night when employed by Gunderson. Once someone called and said a barge was sinking that had structures for the Morrison Bridge on it. He left–did whatever was necessary. The barge did not sink."

Iva continued, "Twenty or more years ago Gunderson's were lowering one half of an LCU down the ways (to the lower end of the ways) in order to build the other half above it (at the head of the ways). This particular time the LCU half got away from them and dropped into the Willamette River (with all the launching gear attached.)

"George put on a diving outfit (had not worn one before) and a painter's mask," according to Chuck–no diving mask was available, "went into the river and cut loose the launching gear and retrieved it."

"Later on, while George was recuperating at home from an illness, Chet Gunderson called him and kidded, 'George, I lost my watch in the Willamette River.' George replied, 'Mark the spot, and I will get it for you.'"

Chuck, who had ridden the runaway vessel down the ways, explained that the one half of an LCU had caps over the propeller shaft hole. It had been lowered down the ways to make room for the building of the other half when, on completion, the two halves would be joined.

L'IL TOOT, Gunderson's oft mentioned work boat, also assisted in this rescue.

Swing table switches cars back up the line

There was Thad Stevens, Production Superintendent until he retired after 36 years, December 27, 1979. Among the ingenious ideas he came up with was a swing table at the north end of Bay II.

When the company was building its first railcar order for 200 Union Pacific gondolas space was very cramped. The railroad spur on which the finished cars were switched across Front Avenue onto the main line, entered at Bay I and perpendicularly crossed the railcar production line. When a completed car came up the line in Bay II, it had to be hoisted up into the air and turned at right angles, then lowered carefully on to the outgoing spur track.

When we began building box cars in 1964, the production line became much longer and required two bays. The line began in the south end of Bay II and proceeded to the north end of the line up near the machine shop, then the cars had to be shunted back southbound in Bay I where the ends and roofs were put on and the cars were finished.

That was when Thad came up with his idea of a swing table.

Thad rigged up a platform or foundation made of steel I beams which rolled sideways on wheels. On top of the platform he installed railroad tracks enough for one car length. The far end of the platform was anchored to a pin in the concrete floor and allowed the platform to pivot like the forearm pivots on the elbow. The car entry end of the platform pivoted or rolled sideways until its track matched up to the track going back down line in bay one. The track height on the platform matched the track height of the carline. A box car, on completing its stages in Bay II would be rolled on to the swing table, carried sideways until the track fixture matched the carline track in Bay I, then the car would be rolled off onto the carline in Bay I. This idea enabled Gunderson to achieve production of up to 20 cars every day!

Adapting machines from one use to another

Another innovation they remembered was a gem. They needed some means to propel the railcars through the yard faster than they could with peaveys and couldn't spend any

money for it. So someone came up with the idea of using the old TD-9 International tractor which had been used for years around the yard as a bull dozer. They took off the dozer blade, fitted the tractor with special pads on the tractor tracks and, with a chain, towed the cars up and down the line.

Chuck said "All of the gang mills did not sell. So we used an arbor frame from the gang mill. It was hydraulically operated with chain powered rollers so we used it to build side sills and center sills for flat cars. The steel for the sills would proceed through the arbor frame, being fit and welded as it ran through."

When Ways #3 was built, there was no overhead crane to serve the ways when the Port of Portland's dry dock sections were being built there. So the only way that fabricated sections could be lifted on to the dry dock was with a crane with a long boom on it. The crane was an old four-axle 16-tired Manitowac truck crane that had been bought from a logging company.

A ramp leading from ground level up a gentle incline to a platform, built on top of log pilings, enabled the crane to be positioned amid-ships to service the dry dock section. According to Chuck, as the crane "walked" up the ramp, they needed to counter balance the crane with a caterpillar tractor so the crane wouldn't tip over as it leveled out on the platform. They anchored the crane with the caterpillar. (See Footnote 2)

The shrink and the teachers

Ed Pixler, Marine Foreman, who retired in July 1977 after 25 years of working at nearly every job in the plant, taught Chuck the proper ways to use the welding equipment, how to burn with a burning torch using the correct gas pressure, the correct torch angle and clean tips, and also how to fit. What Chuck learned from Pixler stuck.

Chuck Anderson was the "shrink" of Gunderson. He learned this art from Johnny Young, a foreman, who was an expert at it.

In this case the "shrink" means using heating torches to bend a steel assembly, or to put camber in it or take a "wow" out of it, by means of applying heat in just the right places.

On the first box car order for 200 box cars, 22 of them had belt rails installed inside of them to secure auto parts from moving and being jostled back and forth when the cars were in transit. On these cars, when the belt rails were welded to the interior sides of the cars, it caused the whole car side to bow outward. By applying the correct amount of heat, Chuck straightened the sides without their having to be removed or rebuilt.

Chuck told me that he is now teaching the younger supervisors how to shrink and the young welders how to do their job right. I thought, "How wonderful it is that these skills are being passed on from one generation to the next."

The inspectors

Chuck and Ed remembered some of their experiences with the railroad's inspectors. Sometimes the small difference in opinion between them and the inspectors were settled in a friendly way.

On one occasion, Chuck told the inspector, "Let's settle it over a game of pool." He beat the inspector and the quality problem was settled then and there.

Chuck smiled when he told of occasionally providing liquor to the inspectors to promote good fellowship. One time someone with two bottles was on his way from the main office to the inspectors' shack across Front Avenue when he tripped and fell at the front door and broke the bottles. When the messenger asked Chuck what to do next, Chuck said, "Go back and see Bruce (Ward) and get two more."

Ed and Chuck had a tough time pleasing the inspectors for the Union Pacific when they were delivering the railroad's first order for gondolas. These cars had drop bottom doors that were opened and closed by inserting a bar into a cam and turning the cam. In order for the cars to pass inspection, the test specification was, that one man could open and close the doors with a four-foot bar. At first the doors worked very stiffly and they had a tough time demonstrating that the doors would work. One of the inspectors told them, "Go into real estate. You'll live longer. You work too hard."

Ed and Chuck laughed as they thought of how Chet and Elaine would sit on their boat house patio and watch the work progress in the plant. If they saw anyone loafing they would telephone Nick Thomas, Plant Superintendent, and instruct him to get them back on the job or fire them. Of course, Nick wouldn't fire the person, just give him a warning and a lecture on keeping busy.

Early launch of dry dock pontoon

Ed told of a humorous 1962 experience about Al Gunderson during the early construction of the pontoons (the six sections comprising the Port of Portland Drydock after they were launched and all joined together).

When the first pontoon was ready to launch one morning, and unbeknownst to Ed, Al brought two friends to the plant to watch the launching. But Ed and his graveyard shift workers had finished the pontoon before 7:30 AM, and had launched it so they could get on with the next one.

They were going home as Al and his friends arrived on the scene. Al asked, "Where's that pontoon?" When Ed said he had already launched it, "Al had a fit" and was really upset that he and his friends had missed the launch. Had he notified Ed of his intentions, Ed certainly would have either held the launch for Al or told him to come early so as not to miss it.

Near miss on Columbus day, 1962

Ed and Chuck recalled the Columbus Day Storm on Friday, October 12, 1962.

On Thursday, the day before the terrible storm, Gunderson had just completed the big Port Of Portland Drydock and had hired several tugs to tow it safely across the Willamette River to the Port on Swan Island.

Had the job been delayed just one day, the drydock may have been lost or seriously damaged by the torrents of wind on Columbus Day.

Maybe it was a good thing that Al and his two friends missed that early launch of the first pontoon.

They said that in the early bidding for the drydock, Chet had worried that he wouldn't get the job with the first bid price so he dropped the price, but as it turned out, the first bid would have won the job anyway. So all that money was left on the table.

Anderson-Belt line A.K.A. the Gunderson short line

In today's environment at Gunderson Inc., the spirit of invention, change, and make-do still exists among its employees.

When Gunderson ventured into car repair work in 1985, they suddenly needed a vast amount of additional trackage on which to move and store the extra cars that they would be handling. The track rails would cost a fortune and there wasn't that kind of money available.

Chuck Anderson and Chuck Belt got their heads together and came up with a fabricated steel railroad track made out of 1/2" by 10" steel plate with a 1-1/2" by 2" bar welded on to serve as the rail. The trackage served its purpose very well.

The savings of several thousand dollars due to this cost-avoidance measure was truly significant. At the same time, they used material from stock on hand, so the reduction of inventory was also important.

They made up a half mile of this trackage including four spurs that run through Craneway 5 and at other locations in the yard. It has come to be known as the Anderson-Belt Railway, A.K.A., "The Gunderson Short Line."

Two who fostered major growth

Between the two of them Ed and Chuck had a strong hand in the construction of nearly 60,000 railroad freight cars. Today they are among the prime movers of the expanding Gunderson Inc. They began at the bottom, rose through the ranks and became skilled journeymen in their respective trades. Their leaders taught them how to manage and motivate others; they now teach others to follow in their footsteps. That is, and always has been, the heritage Gunderson offered its new employees – learn, strive, grow, lead and then, teach.

So all of the Gunderson artisans have come a long way – from the "Bull Wheel" (first used on the J. B. SWITZLER in 1944 and allows welding to be done straight handed, or in a down-hand position. It's still being used on railcars today.) – to the Anderson-Belt railway – still improvising and making do as the need arises.

Footnotes

(1) According to Leighton W. Johnson, former Gunderson Chief Engineer, plant plan No. C628-D, dated September 15, 1952, indicated that the total plant acreage was about 10.6 with about 5.57 under cover.

(2) There is a photo of this crane alongside Ways #3, when a dry dock section was launched. It clearly shows the ramp, the crane, the built-up crane platform and the height of the platform above the floor of the ways. This photo is Ackroyd's No. 10970 dated June 8, 1962. I may have seen the photo at Ackroyd's studio.

Ferdinand "Fritz" Dummer, master machinist

When I began thinking about writing a history of Gunderson, I thought it would be a good idea to trace the genealogy of leadership back to the company's beginnings.

Idea of shop genealogy

So I wrote a letter to several "old timers" asking their help in this effort. I also asked help in identifying the origin of Gunderson's L'IL TOOT. I asked several other questions concerning what we did during the late forties and the fifties.

Only a few responded to my letter, some with sparse information, others said they couldn't remember the "old days". Some had passed away.

One of those letters, received a few years ago, was from Fritz Dummer and is quoted later in this chapter.

After some thought, when I considered the line of succession of foremen in the burning alley, carpenters, crane operators, laborers, marine side, painters, plate-shop, riggers, teamsters, welders and dozens of other departments including the offices,

there would be hundreds of names to get correctly and in the right order. If I left one out, someone would be hurt. It was not possible to complete such a project without adequate records, and many of these are lost, so I gave it up.

Suffice it to say, that for the genealogy project, let Fritz Dummer be the symbol and representative of all those who became foremen of the different crafts before and after him. Here is his letter:

Succession of machine shop foremen

"Dear Bennie,

"Sorry that I am so slow getting back to you, seems the older we get the more difficult it is to probe my memory.

"I didn't know much about Kurtz being machinist foreman and if he was, then it was before World War II. Here is the text as I remember it:

Henry Kurtz *	Linnton Plant	1937-1942
Glen Riley	Linnton Plant	1942-1945
Al Marlowe	Front St. Plant	1942-1945
Glen Riley	Front St. Plant	1945-1949
Fritz Dummer	Front St. Plant	1950-1979
Robert Taylor	Front St. Plant	1979-1980
Chester Krushel	Front St. Plant	1980-1983
Ronald Ulrich	Front St. Plant	1984-Present (1994)

(* Henry Kurtz, Machine Shop Foreman. Linnton Plant, 1937-1942- inserted by Author)

Fritz's career spans 1942-1979

Fritz retired from Marine & Rail Equipment Division of FMC Corporation March 29, 1979. He began his 37 year career with Gunderson Bros. in 1942 when they purchased a Do-All Saw machine from the Continental Machine Company of Minneapolis, Minnesota. He was sent to Gunderson with the machine as a factory trained operator.

Instead of returning to Minneapolis, Fritz stayed on and became a machine shop leadman on the swing shift. As the above chart of machine shop foremen indicates, he became foreman in 1950 and held the position until his retirement.

Fritz's challenges – letter continued

"Yes, the McNary Dam job was the largest and most difficult we had to that date. Much machine work and heavy assembly. The roller bearings weighed 300 pounds each and needed to be assembled in machine housings. They were 24" outside diameter. I actually believe this job proved my value to the company.

"Another challenge in the early 1950's was when we built about 150 - 54" Band Saws which were about 90% machine work and accurate balance of 54" diameter wheels. These were sold to people all over U.S.A. – Some are still in operation.

"Another challenge was when the brothers sent me to check on wheel and axle machinery (for machining and mounting railcar wheels and axles). The last thing Al said to me, that we have contract for 50 carsets and that's all this machinery was to do. These same machines did about 25,000 car sets.

"The diplomacy that had to be used to satisfy rigid A. A. R. (Association of American Railroads) inspections was a rough job for the guy in the machine shop.

"I worked under 17 Shop Superintendents from Gene Quintieri through Virgil Hatfield and I dare say it was a challenge to adapt to the different personalities."

What he built

"I could go on and on of much equipment we built after 1945 – plywood presses, saw mills, edgers, trimmers, gang saws etc.

"I might mention 6 ships called MK Tugs that were built from stem to stern and then cut in two and reassembled at Salt Lake. We also built 7 - L.C.U's (Landing Craft Utility) complete for the U. S. Army and received the sub-contract for 23 more to machine that was built in other parts of the country. This order called for all propeller shafts, rudders and steering systems complete. They required rigid government inspection.

Good luck on your endeavor." – Fritz

Pat Gillenwater

Pat Gillenwater, foreman of Gunderson's mold loft retired May 1, 1989 after 38 years of service. Pat had the stuff that makes companies successful. He was friendly, wore a constant smile and had plenty of "savvy".

His first position, after hiring on at Gunderson, was apprentice. He became a leadman in 1966 and was promoted to foreman in 1973.

Lofting explained

The *Torch & Stinger* of January, 1970 carried a story on the loft. It showed Pat and Bob Garrett studying a wooden model of a barge to determine the size and shape of shell plating needed for the barge. The article explained lofting:

"The loft is responsible for ordering material necessary for fabrication and construction on each specific job in the plant.

"Some of the loft employees work out in the various departments, duplicating the templates onto the steel. Their job is to mark out, or scribe, the shape of the parts, locate shear lines, burn lines, bend lines, punch marks, hole locations, and roll radiuses, if necessary.

"There are loftsmen on each job in the plant, responsible for laying out each section or plate, squaring up and picking up dimensions for additional construction.

"It is, therefore, from the loftsman's templates that we know the shape of things to come."

Pat was more than a loftsman

Pat was more than a loftsman. When, during heavy flooding in December 1964, a Southern Pacific railway bridge was washed out, Pat was sent to oversee the erection of the steel, furnished by Gunderson, to replace the bridge. During the night after the washout, Southern Pacific and Gunderson's Contracting Manager, Warren L. Howe, Jr., were on the telephone discussing the details of the bridge's replacement. Within hours the steel was located, fabricated and shipped out to the job site which was about four hours by truck out of Oakridge, Oregon. Pat's work was instrumental in making a good customer out of Southern Pacific.

Gillenwaters initiate Gunderson retiree picnic

Pat and his wife Cathy hosted Gunderson's (then MRED's) first retiree picnic on August 28, 1976 by putting on an old fashioned barbecue on their property in Tillamook. They provided the food and the guests brought the dessert. 84 and their families attended.

Their generosity didn't stop there. They hosted another retiree picnic on August 26, 1978. "FMC retirees and friends enjoyed fine weather, roast beef, ham, salmon, pinochle, cribbage, horseshoes, and best of all getting together with old friends. Some excitement was caused and some necks were craned when a hot air baloonist, trying to fly overhead, nearly got caught up in the many trees on the Gillenwater's property. He finally passed by without incident," the *Torch & Stinger* reported.

Nor did it stop there. Building on their successful idea, the retirees gathered in North Nehalem, Oregon for another barbecue on August 11, 1979.

Those functions, first hosted by Pat and Cathy, were the beginning of the annual retiree picnic which now has its own officers and special committees. The Gunderson Retirees' Picnic is supported annually by the company.

Pat could always work his way out of trouble

Ed Brumley, Pat's Supervisor, said at his retirement party, "What I especially liked about Pat was that he could always work his way out of a problem that production might have. He would talk to all of the people involved and find the correct solution. We'll miss him."

The best example I could think of, how Pat worked himself out of trouble, was this following experience:

In about the mid-seventies, the company was up-grading all of its equipment, including trucks. There was an old panel truck that was well over twenty years old, and it required a great deal of work to keep it running. It was a "beat-up", old wreck.

The truck was declared surplus and I was instructed to dispose of it. The policy was to get three bids, which I did. Pat was the highest bidder at $150.

Somehow, Pat got the truck started so he could drive it out to his farm. But Pat's son, who was also on hand, was worried about the brakes; so he convinced Pat not to drive the truck on the highway; instead, they decided to tow it with their small pick-up.

On the way out to the farm, going down a hill, the old truck began to swing back and forth violently. The little pick up wasn't heavy enough to control the load, so they ran off the road and totaled both pick-up and the old truck. It was fortunate that no one was seriously hurt.

Undaunted, because the motor would still run, Pat stripped the body from the old truck, kept the chassis, and made an open deck truck for hauling wood around his farm.

I can get it for you wholesale

This is a profile of Jack D. Herron, former Purchasing Agent for maintenance, repair and operating materials at Gunderson.

Knowledge spanned material spectrum

Jack was an expert in his field. We went to Jack for hard-to-find materials, and he worked relentlessly until he found them. He had previous experience with Honeyman Hardware Co., a wholesale hardware house. His knowledge spanned hundreds of different kinds and types of material.

Jack was especially good at buying lumber. In fact, he bought practically all the lumber for the buildings and ship ways at Gunderson. I recall the Columbus Day storm. It happened on a Friday and 1/3 of the roof of Bay I blew off. (See Footnote 1) Several of us met with Chet Gunderson, Saturday, the morning after the storm, and received our instructions for re-building. That Saturday morning, the carpenters and Chet Gunderson gave Jack a list of lumber to buy. Somehow he ordered most of it during that same weekend and the following Monday morning. A week or two later, when everyone else in Portland was still scrambling for the much needed lumber, Jack brought ours right on schedule.

Hoodwinked buyers

Jack and I had many laughs over some of our goofs. One time a salesman from France called on us and wanted to sell us some gasket material. He had quite a problem with the English language. So the two of us listened to his pitch and the more we heard about his product, especially the price, the more we thought we should try some. Both Jack and I understood how much of the material we ordered – a small quantity to try out on a few applications. Apparently, the salesman didn't understand us, or, we really didn't understand him, or he tried to pull "a fast one on us". In any case when the material arrived, it was a 75-pound roll and the bill came to almost $1,000. After haggling back and forth, because of the language barrier, we agreed to what we felt was a reasonable compromise. There was enough gasket material to last for several years. I think we eventually scrapped out most of the roll, because it dried out and became brittle.

Another time, Chet Gunderson felt sorry for a paint contractor friend, who was hard up for cash and wanted to sell some of his equipment so he could get to Alaska for a job he had up there. Chet asked me to buy a sand blast machine from the painter. A few weeks after receiving the machine, it broke down and we needed some parts for it. Jack got the factory on the phone and ordered the parts. The factory asked for the serial number of the machine so they could ship the correct parts, so Jack gave them the number. A few hours later I got a call from the factory's president. He said that the serial number of the machine indicated it was one they had sold the paint contractor, and it wasn't paid for. In fact they had filed a lien, some time before then, against the painter. After some heated dickering we reached a settlement. Chet was fuming at being hoodwinked, because the machine was no longer the bargain it was when we bought it.

Wholesale connections

Jack had wholesale connections all over Portland. He could even get clothing at a discount. Both the Gundersons and their families made a steady stream of requests for small appliances like toasters and waffle irons. Al, Bob and Chet especially liked Jack's prices for shot gun shells by the case. Most of the purchasing department people and others with influence around the plant enjoyed this particular perk. He could get TV's, radios, lawn mowers and electric shavers. But sometime in the late 1970's, most of that stopped. The distributors and wholesale houses began to tighten their control over this type of buying. Fred Meyer's prices became so attractive that we bought most of our appliances there.

A poem, composed by some of Jack's church friends, was read at his retirement party on November 6, 1981. It paints a humorous portrait of Jack's wholesale connections. He may have been buying things for these friends or for their church.

I Can Get It For You Wholesale

"From our friend Jack we've always heard,
"Buying retail is for the birds,
"Jack could get it for us wholesale.

"This has saved us lots of money and,
"Kept our dear friend Jackson running,
"Jack could get it for us wholesale.

"When in need of something new,
"Dear old Jack would come thru,
"So welcome to retired life,
"You'll need to get it wholesale.

"Say, if you need a meal or two,
"Drop by our house and we'll feed you,
"That is better than for wholesale.

"Tonight a little gift we bring,
"And to your friendship we all sing,
"We couldn't get it for you wholesale."

Slight amendment made by history author.

Softball hall of fame

Jack was a native of Portland and a 1933 graduate of Grant High School. His favorite sport was softball. He began playing with a neighborhood team, then later he played for several teams, including Paulson-Schramn and the Hostess Shop, the latter an American League team. He always savored beating Rotary Bread and the Hostess Shop because they were considered the best in AL softball.

In about 1948, after he finished his active career in softball, he embarked on another – announcing the softball games at Erv Lind Stadium. Then after every game, he hurried home and telephoned the game statistics to the newspapers. It was said that he was the man who switched off the field lights before everyone had left the stadium.

Of these two softball careers, the June, 1974 *Torch & Stinger* reprinted an article by Bob Hill of the *Community Press*, from which excerpts are quoted: "Of course those days are gone and can only represent a testimonial to the long and many years for which the veteran announcer has been supporting and following softball. In fact, he's been around for so long that some have compared him to a rare and vintage wine – old and dry. But then age, like everything else, comes with time. And the dryness, well let's say it's just a reflection of the sense of humor which he still very much has."

"Comparing fast pitch and slow pitch softball, he emphatically states, 'There isn't any. Fast pitch is an all-around game of sharpened skills and years of experience. Slow pitch,' he adds, 'is a hitter's game only. It's like hanging the ball on a string for the batter to hit.'"

He certainly knew the game of baseball. Each year at World Series time, he and I would coincide our lunch hour with the last few innings of the games. I asked him dozens

of questions about the various plays and players. He was a walking reference book for that sport.

Jack's name resides in the Portland Softball Hall of Fame.

Friend and counselor

Jack's manner seemed blunt, but I believe his dry humor was his way of having fun with those who were too serious or pompous. New office people, who didn't know him too well, called me and said how mean and gruff Jack was on the telephone. They asked me if I would do something. My reply was, "Hell no, I'm scared too!" I must have been his most enjoyable target in that regard.

Jack was a good friend in addition to being a fellow employee. He arranged trips to a horseback riding academy where we taught my son, Rod, and his son, Pete, how to ride horses. During a period of several months when I was undergoing a period of severe mental stress, Jack was very understanding and helped me through the crisis. Once he sent me to have a massage to settle me down and relieve my stress. He always told me to "simmer down" and not let things bother me too much.

Jack's wife, Esther, used to send fancy pastries to the office with him. They were so delicious that I often told him he should set her up in the bakery business.

His career spanned 35 years, from July 31, 1945 to October 30, 1981. At his retirement party Jack said his retirement plans included "some fishing and chasing beautiful women." The late Jack Herron is survived by Esther and his two sons, Tim and Pete. Both sons worked at FMC. Tim was a fork lift operator and Pete was the material handling superintendent.

Footnote

(1) See Chapter 12, "The FLIP" for details of the Columbus Day Storm

An interview with Everett Hill

December 29, 1991

When we arrived at Everett's house in Sherwood, Oregon just outside of Portland we noticed that his house sat on a knoll and his front lawn sloped down toward Day road. The house nestled on a spacious lot populated with several lovely trees. The white three-rail steel fence surrounding the property was simple, pleasing to the eye and framed the beautiful grounds tastefully. Now for the story of the fence.

Recycled steel slats left over from Hog Car job

Everett had bought the fencing materials from Gunderson in 1964 because a few hundred feet were left over from a job for 300 triple-deck cattle cars which Union Pacific Co. used for hauling sheep and hogs from the mid-west to Los Angeles. Because there was no market for it, it just sat out in the yard and began to rust. His fencing was called slatting and was used for the sides of the cars. The slats were welded to the frames of the cars and were spaced far enough apart to allow plenty of air to enter the car and keep the animals cool and from sweating and losing their weight during transit to market. Previously, cattle cars had been built with wooden side slats but (the slats) got to be too expensive and were too heavy. Everett had kept his eye on the material all that time. Finally he negotiated a price of next to nothing for the spare material and carted it away

to his new home out in Sherwood. He paints it once in awhile and keeps it looking beautiful.

Everett told how he came by some of the doors in his house. Gunderson had made a door sizer for Nicolai Door Company and they had furnished a dozen doors to test out the machine for sizing. When testing the sizer, he incorrectly made the doors about one inch too short. Everett had also been told to correct the voltage of the motors to suit Nicolai's but he had forgotten to do that. After the machine was delivered, Nicolai called about the voltage problem so he dropped everything he was doing and went to Nicolai and changed the voltage. When he asked Nicolai what to do with the doors, he was told to keep them because they couldn't use them.

Everett hasn't changed any since he retired. He is still full of spunk and says everything like it is like he always did. He has a way of poking fun at you and making you laugh with him because you've got used to his needle. He was aggressive and persuasive. He was a fun guy to be around. According to Everett, when Ed Brumley, now Senior Vice President Production & Manufacturing for Gunderson, Inc., hired on in 1956, he was a little green, so Everett told him all he had to do to get ahead at Gunderson was learn how to talk and write memos. Muriel Spear, Personnel Director before she retired, said any time she called Everett on the telephone, he would always answer, "Go ahead, it's your nickel."

Coin flip pointed Hill family to Portland

On their way from Texas in 1943, he and Jackie, his wife, and daughter, Martha, were in their automobile headed to a place where they could find work in a war plant. The families of two of their friends traveled with them in their own cars each pulling a trailer house. They arrived at a crossroad with two signs, one pointed to Pensacola, Florida and the other to Portland, Oregon. Both destinations were just about the same distance away. One of his friends took the Pensacola road and Everett and his other friend flipped a coin and the toss pointed them to Portland.

Electrical shop leadman made changes at Gunderson

After arriving in Portland, he inquired of his union about work. They told him Swan Island Shipyard had openings, but when he found out how big the yard was and it didn't have any construction work for him, he was not interested and asked about other yards. When they mentioned Oregon Shipyards, that was even bigger yet, so he asked if there were any smaller places needing electricians. They told him that a small shop, Gunderson, had just started up and had some openings. He applied at Gunderson and started out the next week as an electrician working for his predecessor, Ted Golmis, Gunderson's electrical foreman.

After a short time, Everett became disgusted with the way things were going. He went into the office and told the head of all electrical work (I believe this was either L. S. Baier or William Shoemaker), "I'm going to work here the next week and that is going to be all." The manager wanted to know, "How come?" Everett replied, "If those guys are electricians, you guys don't know what an electrician is," which was the truth, he thought. The boss then asked, "What does it take to make you stay?" Everett suggested, "Make me a leadman then I can tell them what they should do." So after promising to stay at least six months, he was made "a little better than a leadman so they could give me a little better pay, I guess." The job was on the swing shift and amounted to "(not only) taking care of your marine work but you had to take care of the building also."

Fixes crane trolleys

He remembered the bridge cranes. All they had at that time were those great big heavy wooden ladders and they got awfully heavy sometimes. He had to put the trolleys back on one of these cranes about ten times one night and the last time he put the ladder down, he told the guys if it happened again, get somebody else, he was tired and was going home.

The next day he went in to see Al Gunderson and L. S. Baier, General Manager, and told them what a "lousy setup the cranes are up there". Baier, indignant, said, "I designed those up there!" Everett insisted, "I don't care who designed them, they're still lousy. They didn't know what they were doing." Baier asked, "Well, what would you do?" Everett said, "In the first place you make trolleys where they will follow; you don't make them rigid so that they jump off the tracks when something is not just right." So they learned how to make the trolleys that didn't jump off the trolley wires.

Stubborn ship launch, then rough sailing to Astoria

In about 1943, when the first LCM (Landing Craft, Mechanized) was ready for launch on the marine ways, Everett relates the details of the ceremony, "We had an air winch at the head of the ways and we had about ten turns of one inch steel cable around a block down on a dolly underneath the cradle of the LCM. There was a big ceremony. The champagne bottle was busted, the dolly was released but the ship wouldn't budge. About 20 of us tried to push it down the ways and it still wouldn't budge. So we had to take all but two turns of cable off the blocks, then it worked fine." The ten turns of cable were just too heavy and wouldn't allow the ship to move.

Then, when the first four LCM's were built, they were lashed together and skippered to Astoria by Frank Ellison, the Gunderson Bros. company pilot. "We left at night as usual," Everett joked, "and it was raining. In back of a two-foot square pilot house they had a place which they called the lazarette. A couple of guys and I were down in this lazarette, when the boat hit a submerged piling and tilted up while it was passing over. I grabbed a lifejacket and headed out of the lazarette through a little square hole, then when the boat settled back down I went back in and curled up with my lifejacket for warmth. Later the skipper came back with a flash light and noted, 'Hell, they didn't even wake up.'" He didn't know that Everett had headed out that square hole with his life preserver ready for a quick shore leave. On arriving at Astoria they had to repair the damage to the LCM's caused by the submerged piling. Then the LCM's were loaded aboard a ship by a big crane using special wire rope slings with which each LCM was equipped.

Everett tells about having to make some switchgear for gravity davits that were built in 1944 and 1945 for the Maritime Commission. These are devices used on a ship to hoist, stow and lower the lifeboats. They operate automatically at the push of a switch button. He had worked 40 hours straight, and, when finished, just fell over in the control box and went to sleep. Somebody took a picture of Everett, asleep in the control box.

Hill appointed electrical foreman

After about a year and one half, they made Everett a foreman. Then Golmis left and Everett became head of the electrical department and remained in that capacity until his retirement.

He was concerned about the safety of others. He had quite a crew of men and about 20 women working for him doing wiring in the electric shop. Some of the women, even a 90 pounder, had been carrying heavy engine batteries from one point to another. Everett called his men together and told them, "The next time I see a woman carrying those

batteries, there's going to be some guy fired." He related, "And that was in the days when you could fire somebody." He said he would have been totally lost without the help he got from the women. (After the war his crew went down to about three or four for a time.) There were a lot of women working during the war and they were good workers, too. There were several husband and wife teams. Clarence Wallin, a marine foreman, brought his wife Laura to work with him every day. She worked in the electrical department.

Hill recalled early Gunderson shop facilities

Everett reminisced about some humorous experiences with Chet and Al Gunderson.

One of these was when Chet came out of the back door of his office and discovered Everett and his helpers pushing a conduit under Front Avenue with a piece of pipe with a point on it. They used a hydraulic jack and would push ten feet and then screw another ten foot piece of conduit on to it and push again. Chet asked Everett what he was doing. Everett explained that the hole was for an electrical line to the new fabricating building across the street for powering welding machines, cranes and other equipment. Chet chided Everett that the idea wasn't so good, that he was wasting time, and left with a shrug. But Everett kept at it and, luckily, without hitting a sewer pipe or other obstacles, "We pushed the conduit all the way under the street" and even hit the hole that was dug in the building where the conduit entered from under the street. Chet returned and saw the completed tunnel so Hill's credibility went up a notch or two. There still were obstacles for Hill. When he got the power to the new Quonset building he had to obtain and install an electrical converter to change the power from alternating to direct current for the motor in the old crane that Chet and his buyer had picked up in some junk yard.

Wine bottles exploded and other trying times

At Christmas time, Izzy Subotnick, a scrap dealer who hauled away all of Gunderson's steel scrap, usually brought a gallon bottle of his home-made wine to Al and Chet and several others who had anything to do with the scrap. That particular Christmas, Chet's gallon of wine blew up and broke the bottle. Chet quickly phoned Al to warn him about the wine but while they were talking, Al's bottle blew up too. It was sitting on a baby grand piano and the piano had to be tuned and whatever other damage repaired.

In about 1946, Chet built a building for lease to Graybar Electric Co. on some spare land next to his Equipment Division in Eugene, Oregon. He sent Hill to Eugene to look into a electrical construction contract for the building that he thought was too high. Hill recounted, "After talking with the contractor, and letting him know we could do it ourselves, he came down about $5,000 and Chet was quite happy and told me I had earned my wages and to come on home." Shortly after that, Chet sent Everett to Eugene to do over a ballroom in the Eugene Hotel.

Hill did things his way

Then there was the time when Chet told Hill to install some fluorescent light fixtures in the offices and he wanted them recessed in the ceiling: "He said, 'He would like it done HIS way just once' and he left for a month's vacation. Well, when we started I could see that something was all wrong. We would have to cut about five inches out of the ceiling joist. So I got Larry Preuss, Chet's Construction Engineer, and he said we couldn't cut a section out of the joist; that would make them too weak, so he dropped the whole ceiling to take the fixtures. When Chet came back he liked the job and never did say anything about the ceiling. (The ceiling joist was also the floor joist for the mold loft and engineering department on the second floor.)

One time Everett was installing a movie projector in one of the walls in Chet's boathouse. The wall had some very nice paneling on it, but Everett had cut a hole in the panel for the projector wire to go in. Chet saw the hole and called Everett down to the boat house and said, "What in the hell, I paid $30 for this panel and you...." Everett said, "I don't know how you're going to get from here to there without it (the hole). So I'll do it whichever way you want." He said he didn't pay for the panel; "I never offered to pay for anything. There was a wire that went all the way across the room from projector to a speaker. Charley Lynn was there and heard him give me hell. Charley even caught hell from Chet because he had knocked out some 2 by 4's," during the remodeling. The projector wire was installed and the hole was covered over with a nice face plate.

Everett's blowing dust from air ducts ired Al Gunderson

His job wore on the nerves of people less patient than he was. One day he and Bob Snyder were blowing dust and debris out of the ventilation system in the office. The dust and dirt was blowing everywhere and particularly in Al Gunderson's office. He came storming out in a huffy to see what was going on, but Everett told him he had a job to do and finished it. After they left the scene, a blustered Al called Pete Gonzales, head painter, and his crew to come in the office and clean it up.

It's obvious that Everett, as head of electrical and maintenance, had plenty of work for the machine shop, whose foreman was Fritz Dummer. Everett recalls that he and Fritz were at each other's throats all of the time and swore at each other in anger, "But we were the best of friends. I would help him and he would help me." They were very much alike. Both were conscientious. They wanted to get the job done quickly and correctly.

Everett was generous. In 1948 when Chet's farm, his barns and house were flooded out, several men were sent to Scappoose to make repairs. It was on a Saturday and Sunday. At that time they were paid time and one-half. Everett had to go out there and get all the electrical up and running; but he refused to take pay for it. He said, "If a guy gets into trouble, no way would I sock it to him, but if he's not in trouble, then he's going to pay." He didn't want to make points with Chet and didn't think that it would get back to Chet but it did and Chet was very pleased.

Everett experienced many dangerous moments in the environment to which he was exposed. It wasn't always possible to forecast one's working conditions in the field, and how the weather and other conditions would affect the work. Billy Love, Tank Engineer, was in charge of tank-building and their erection on site. Everett remembers that Billy called the guys in the shop, "Clowns".

In 1949, Love got an order from the Veteran's Administration to build a 250,000 gallon elevated water storage tank at the Veteran's hospital in Portland. Everett and Johnny Hemstreet, Erection Foreman, were placing fittings for a rust preventative system around the perimeter of the tank. Each of them was working, close together, off of ladders placed on a high platform that encircled the tank. Aluminum anodes were screwed into special holes all around the tank. Then a cover had to be put on and screwed down tight.

Everett had just finished screwing on one of the covers and had raised up from his work to move to his ladder but he noticed that Johnny had shoved the ladder out of his reach. He hollered at Johnny and started to slide, hoping that the rim around the edge of the tank would hold him. Johnny jumped and quickly shoved the ladder back to Everett. He made the ladder just in time but it took him a half hour before he could get up nerve to go up again and finish his job.

On a similar job at the Umatilla, Oregon Ammunition Depot, he and George Okeson were really surprised when they were not permitted to take their cigarettes, matches and

lighters into the project, whereas they were taking in highly flammable Acetyline, oxygen, burning torches, torch lighters and hoses for burning the holes in the tank for rust prevention anodes!

George's wife Iva, in a letter of June 14, 1986, wrote about his experience, "A long time ago George and Everett Hill went to Boardman to do something to a water tower, probably for the Army Depot where ammunition is stored. They had to climb to the top and George said the wind was blowing like sixty, and the bird excrement so slick they could hardly stay there."

Hill became language instructor

In the early 1950's, a sawmill customer in Brookings, Oregon kept having trouble with the his electric set works and log carriage. Prior to this, Gunderson's set works had been hydraulically driven and this was the first one they had built. It moved an eight foot log through a big saw, then, after the cut was complete, shot the log back like a bullet to its starting position for its next pass through the saw. To get a 2" thick piece of wood out of the log, you punched a button, and you punched other buttons to control the carriage and other functions. The owner of the mill was not a native English-speaking person. He always called Everett when he was in trouble because Everett kept correcting the man until he knew what he was trying to say. Everett always kept calm when tinkering with the carriage controls especially when that "awfully big log" was flying toward him.

Hill's wild ride on File-A-Way

In the mid '50's when the prototype tower for Gunderson's File-A-Way parking system was erected in the yard, complete with wheels on track under it and ready for testing, Everett was the first to operate the tower. The tower's elevator was mounted on railcar wheels which rode on railroad tracks to facilitate a sideways movement while it was transporting an automobile vertically to its designated pigeon hole.

Everett engaged the tower's horizontal traction switch and after the elevator began moving sideways, he pushed the stop switch but it didn't work. He frantically yelled for help to Bob Snyder, his right hand man on the ground. Fortunately Bob heard the cry and dove for the electrical disconnect switch on the ground, reaching it just in time to stop the tower's motion and to prevent injury to Everett and destruction of the tower. After the incident, Everett installed a master disconnect in the tower elevator in case the stop button did not work.

Troubleshooting in Alaska and elsewhere

During 1959, Everett and Leo Nelson, a diesel engine technician from Gunderson's downtown Equipment Division, went to Pribilof Islands about 300 miles Southwest of Alaska to install a diesel engine-driven electrical generator and switchboard built by General Electric Company. The equipment was for powering the processing of skins of hundreds of seals that the Aleuts harvested with clubs as they came up on the beach. Every spring about 80% of the world's fur seals visited the islands to breed. He didn't like flying to begin with but his fears turned into frightful moments when the airplane pilot, with limited visibility, "Skimmed the icy waters. When he saw the rock cliffs he would pull up, then level off, but then he couldn't see the landing strip. It was socked in so we had to go back to Cold Bay." And the town was well named. They froze there that night and returned the next day. After all the trouble getting it there, the switchboard was wired with the wrong voltage, so Everett had to rewire it and make a sizable back charge against its maker. Before making the changes, he wisely took photos to prove the

backcharges to an irate General Electric. He explained how he rigged up to test the generator. "We tested the units which were 440 volt 3 phase to about 1,200 amps. Gunderson built a large vat that we filled with water, then we would lower the three banks of Resistors (one for each phase) down in the water. To get the load we wanted, I found the water too pure, so to make the load on the generator, we added salt – and did that water ever boil, by the time the test was over."

In 1961, he recalled when he and Leighton Johnson, Gunderson's Chief Engineer, traveled to Todd Shipbuilding in Seattle to settle a quality problem with some galvanized hatch covers and doors Gunderson had built for them. "In all the years I've known Leighton he has always had a smile on his face. I had never seen him mad. And I was pretty good at arguing a point. When we arrived at Todd's office the Todd people began telling us what a rotten chunk of work we had done. Leighton grabbed on to the sides of his chair, and shouted, 'Wait just a minute, if this meeting's going to start off this way– we thought you were going to help us solve the problem–then we're going to break it up. We'll go back to Portland.' Then it (the meeting) settled down and went well from then on." Everett remarked, "I think their complaint was welding and we knew we had the best welders. I also think the galvanizing had warped them a little. Anyway, Leighton solved the problem without any help from me." Afterward, Leighton asked Everett, "I thought you were going to help me!" Everett replied, "Leighton, you knocked the sails right out from under me. I have never seen you lose your cool like that."

Another one of Everett's anxious moments came when he was involved in an inclining experiment with a pontoon section of the Port of Portland dry dock in December, 1962. During the experiment the pontoon's ballast tanks on one side of it were filled with water making it tilt 25 degrees to one side. The test was needed to make sure there were no leaks in the structure and that the pumping system worked. He was standing in the walkway area atop the pontoon and hanging on to the side rails as it tipped over when ballast water flooded its one side. He said he was never so glad as when he heard the low side of the pontoon hit the water.

Electricians and maintenance crew on call at all hours

Everett and his crew of 1976 consisting of Robert "Bob" Snyder, Ed Fish, Vern Davis, Jim Lunsford, Frank Gillenwater, Jerry Gannon and Leo Beseman and others handled hundreds of details in Gunderson's big plant. They fixed electrical controls and motors that failed, overhauled hydraulic apparatus, fixed the pipes and plumbing when they went on the "fritz", and saw to it that spare parts were on hand so that the plant would not be shut down for want of a machine. Some parts for older machines had to be made because they were no longer available. They had responsibility for heat, lighting, air supply, water and gases for welding and burning.

"I needed it yesterday"

It took a buyer with special qualities to satisfy Everett's material needs. Those qualities were: a sense of urgency, a memory for parts numbers and sources, and the ability to hurry the supplier in shipping the order. All the while being urged to try to save money. In the purchasing department, Michael "Mike" Illias or Jack Herron had those special traits and patience to source the thousands of parts and get them in the fastest possible way in order to prevent a plant shutdown. Everett wouldn't take excuses for parts delays. He would say, "If I hadn't needed it yesterday I would have told you so!" These buyers issued the greatest number of purchase orders, by far, in the purchasing activity.

In the icy wintertime before they went home, Everett and his crew turned off and insulated all the water lines to keep them from freezing. Then in the middle of the night a call from the graveyard shift sent one or more of them hurrying to the plant to mend a broken pipe or valve. One night Everett got a call from Virgil Hatfield, Plant Superintendent at the time, who said the rain gutters draining the roof over one of the bays had frozen and were overflowing. So Everett dropped what he was doing and rushed to the plant and he and Virgil beat the downspout to break up the ice and get it out of the downspout. Ev said, "This was not a job Virgil had to do but I sure was glad he helped me. There wasn't anything I wouldn't do for him after that."

When Chet Gunderson visited the old Kaiser Vancouver shipyards and found that they had several surplus overhead traveling cranes for sale, he could see that they were just right for his new fabricating bays and instructed Benny Lundquist to buy them. When the cranes arrived at the plant, Chet had them shortened or lengthened to proper bay width; meanwhile, Everett overhauled the electrical apparatus to make it work and meet the prevailing electrical codes. The cranes rolled over crane rails resembling railroad track and had power collecting trolley wheels that took electricity from a solid round copper wire that traversed the length of the craneways. Each time a crane came in, Everett called the purchasing department and ordered more used copper trolley wire.

Everett said he did a lot of work out of the junk pile until Virgil Hatfield took charge of materials management in 1966. After that, Hatfield's policy was, "If you didn't use it in a year, get rid of it." Everett agreed that he was right but didn't think so at the time.

A good teacher

Everett was a good teacher to his men. In addition to his instruction, they had good intuition and mechanical ability honed in their early days of fixing machines and keeping them running. Training was also a key to the success of his department. His men attended factory seminars to learn how to run the various machines of the plant and keep them running .

He has said Bob Snyder knew every machine inside and out and memorized every system by heart. He said the same is true about Ed Fish and the garage. Each machine had it's own cantankerous disposition and once that was understood, everything usually went smoothly.

Hill said best news was when FMC bought Gunderson

He said the best thing that ever happened to Gunderson was when it was acquired by FMC Corporation in 1965. FMC inaugurated the first pension plan at Gunderson – there was none before. Al often talked of it but nothing was ever done, especially after the two brothers began feuding. Now all the old-time salaried employees not only have Social Security but have their pension too, which was made retroactive to all of their years of service to Gunderson. Everett had been on an hourly basis and was collecting some big checks due to all of the overtime he was working. FMC wanted him to go on a straight salary and he balked at that because he knew he wouldn't be making all that money. But finally he negotiated a salary arrangement that suited him. He was happy he did because it qualified him for pension and FMC stock purchasing rights.

Hill retires to life of honeydew

Everett Hill retired on February 28, 1978 after 34 years. He was Maintenance Superintendent for almost all of that time. During his farewell speech he said, "I plan to

play golf, fish, and work for a honeydew." A honeydew, he told the *Torch & Stinger* editor, is his wife, "She says, 'honey, do this,' or 'honey, do that,' and I do it!"

Big Joe Huserik

This account was written with the help of a meeting between Joe Huserik and June (his wife), Shelby Clark and Benny Lundquist on January 4, 1992; Benny and Joe's tour of the shipways #4 on August 3, 1992. Benny and his wife Maxine also met with Joe and June at his home August 17, 1992.

Before Joe came to work at Gunderson, his prior experience was in logging camps. He was a champion timber faller, with an ax or on one end of a long saw used to saw down trees. He was also a farmer just prior to working for Gunderson.

When the United States entered World War II, he needed to get into some kind of defense work so he applied at Gunderson. His first contact there was Esther Sonnenberg, the Personnel Manager. She said they needed a carpenter "upstairs" which meant the lifeboat line needed one.

He was hired, and his first job was framing the plywood lifeboats. His first boss was Carl Morris, on day shift. Carl is now a Portland artist renowned for his paintings. (Carl's late wife was a sculptress.) Soon Joe was working under Robert "Bob" Isham, Superintendent of the Lifeboat Division. Bob kept switching Joe from one kind of piece work to another, until Joe said to Isham, "Can't you find something I can do right and stay on it?" Isham said, "I want you to learn the operation." Joe got mad and told Isham he was quitting. Isham said, "If you walk out that door, you're in the army. I got you deferred." With that Joe stayed.

One day, Charlie Wahl, Gunderson's head carpenter, came upstairs looking for two carpenters to help on a project, so Isham grudgingly loaned Joe and Tillie Tollison for the work. The two helped Wahl finish his job, then returned to the lifeboat line.

Charlie soon came back and wanted the two same carpenters again, this time for good. Isham flatly refused, but Charlie threatened to go to Chet Gunderson, so Isham reconsidered Wahl's power and let them go to work for Wahl.

When asked where he obtained his skills as a carpenter, Joe said he was raised on a farm where you can learn how to do many things. He also had a good teacher in Charlie Wahl.

During the devastating flood that occurred during May, 1948, Chet Gunderson's farm in Scappoose was under water. Several people from the Front Avenue plant went to the farm to round up his cattle which had broken loose. They brought an old sow with her litter back to the plant for safekeeping.

Joe wrote an account of what he remembered of the incident, "The first time I had anything to do with the pigs in the plant, I came to work in the morning and somebody came to me and said to pen up some pigs that were from Chet's farm.

"I am not sure who told me to do this. The pigs had been brought up the night before and a pen was built with oil drums and the pigs proceeded to move the drums and were running loose in the plant. So, we built a safer pen by Ernie Pautz's office with lumber.

"Somebody got the idea to bring a pig into the office and hold it behind a typewriter. I told them 'Go to hell.' Then somebody else came and told me to do the same thing and I told them the same thing. Finally a third person with some authority related the same, so I said, 'OK'.

"My partner, Ernie Rosier, and I went out to the pig pen. After talking it over we decided the big sow of about 400 pounds was too big, so we decided to bring in one of the smaller ones. As soon as we started messing around with her pigs, the sow put up a fight and it took a 2 x 4 to keep her at bay while we caught one of her little ones. I got a hold of one and brought it to the 4700 office front door.

"Elaine Cramer (telephone receptionist who later became Mrs. C. E. Gunderson) was waiting with a lipstick to beautify the piglet, but it had an accident which had to be cleaned up.

"So finally, I held it behind the typewriter and Ackroyd took pictures. One of the office gals told me to turn it loose in some other gal's office, but I turned it loose in her office and as I remember she got on top of her desk. Then the pig went down the hall into Billy Love's office and under the desk. I dove under the desk and Bill said, 'What the hell is going on?' I replied, 'I'm catching the pig,' and of course he asked, 'What the hell is a pig doing in my office?'"

Joe continues with some other experiences. "Charlie Lynn and I were working on Chet's boatwell (underneath Chet's boat house where he and his wife Elaine lived) and we found a beaver nest between the logs." When Joe told Chet about the beavers, he called up to Elaine to be careful or the beavers might come right up the stairs.

"In 1950 Gunderson had a job to put up a water tank on Bradford Island above Bonneville Dam; the carpenters were to build the form for the concrete. The forms were built in the carpenters shop and loaded on a company flat-bed truck. Charlie Wahl, the boss, said I was to drive the truck. I thought he was kidding, but come Monday morning, Fred Chillburg and I started out; upon crossing the St. Johns Bridge, Fred asked if I knew how to drive this truck. I told him I got it this far and soon we crossed the Vancouver Bridge, and we were headed for Bonneville. The truck traffic was heavy, with Charlie Wahl and an engineer ahead of us in a car. On arrival at the dam, the orders were no traffic over without a pass, so we had to go to the Bridge of the Gods to cross to the job site.

"We had to tear down a wooden water tank in a lot of poison ivy which affected Wahl and he couldn't work for a long time. We had to dig out stumps and then dig holes for the footings, necessitating a crew of three. When the forms and steel rebar were in place, I had ordered the concrete but the inspectors said that the steel was not correctly made, so the concrete had to be canceled.

"I called Bill Love telling him of the problem which he denied. I said I would not argue with the inspector; Bill Love yelled, 'Who am I talking to and who is Joe Huserik and where is Charlie Wahl?' Bill finally agreed to have the extra necessary rebar by my time clock the next morning, so I ordered the concrete which necessitated the building of a skid-way up the hill to pull the concrete up to the forms. The skid-way was built like a ship launch ways, greased; on a hill was a 45 degree angle; we had an electric winch at the top to pull the box of concrete which had to be adjusted at the top, so it took 2 men to take care of that so the concrete would not spill. There were extra men to help pour, the steel men finished building the steel tank."

An ex-farmer, Joe used his knowledge to good advantage on several "government jobs" for Chet Gunderson. (To the uniformed, a "government job" is done for someone within the company, usually the owner, a member of an owner's family or someone with a lot of influence in or outside the company.) In 1946 and 1947, there wasn't much going on in the plant, so Chet had his carpenters putting up buildings on his farm in Scappoose. Joe was called upon to finish Chet's barn that had been started by Rudy Krauss and Dan

Malaar, also plant carpenters, when Chet sent them both to Eugene to stay at and remodel the newly-acquired Eugene Hotel.

Rudy had been with Reimers & Jolivette, a building contractor that built the first buildings on 4700 NW Front Avenue and others in earlier years for Chet.

So Joe finished the barn, built a chicken house, runs for peacocks and pheasants. Chet wanted a concrete hog pen floor and trough, all made in one pour. Joe didn't order enough concrete, and it was too late in the day to get more from Portland so he had to dash into Scappoose to buy cement and mixed the concrete with a shovel.

Post eliminate cribbing on pontoons

Chet Gunderson was proud of Joe's skill in making labor saving devices. One of Joe's ideas simplified the preparation of timber supports for each of six big dry-dock pontoons while they were on the ways. He saved time and a lot of cribbing timber between pontoon launchings by making simple, movable post supports instead of cribbing with expensive timber blocks. When asked about this particular device, Joe wrote the following:

"The dry-dock job we had; it took a new ways (Ways #3) to be built necessitating much cribbing, post supports. The bottom of the pontoon section was like a cross, all on the same base line on the four corners. It had a dead rise, the part next to the river was a problem. If we cribbed with block, it would take a lot of material and it would have to be moved out to launch. I told Chet that I had a plan with posts that we could lay down and go over it; he said crib it."

Joe continued, "Nick Thomas (Plant Superintendent) and Larry Preuss (Construction Engineer) told me Chet had said that I had some other idea and not to let me do it." (Chet didn't think Joe's idea would work and told Nick to insist on the regular cribbing.)

Nick and Larry liked Joe's idea and disregarded Chet's instruction. "They said Chet would be gone for two weeks and said go ahead and do it, so I implemented a swing shift having Joe Boloupe on swing with one man and Louie Huserik on days with one man (to get it done in time). This was not on blue print; it was an idea, and when Louie's partner said Joe was tight with the prints, Louie told him there were no prints. Larry Preuss had the transit (a survey instrument) out on the ways to give the base line shots, and I would line out the swing shift on what to do. All was accomplished before Chet returned.

"The Monday after he came back, he and Larry Preuss came out to the ways and he looked down at what we had built and he said, 'When the hell did you come up with this idea?' I told him, 'When I was milking the cow.' As I remember, we launched at six in the morning and by noon, we had the blocks in place to lay steel for the next pontoon. Chet came out to look it over and when he saw me he said, 'Jesus Christ, don't sell that cow!' Chet was to reminisce many times through the years about that dry-dock and how much time my idea saved."

The pontoons were built on old Ways #3. When barges were built in that set of ways, it was not long enough to complete a whole barge. So a length of barge would be built then lowered down the ways to the water's edge and sometimes in the water. The lower end of the barge was ballasted so it wouldn't raise up as it sat partially in the buoyant water. The barge lowering was done with a steam winch which wasn't run by steam, it was run by air from an air compressor. There were two of these winches, one in Ways #3 and one in Ways #2. Joe said, "These winches Billy Love found some place in some junk pile."

Oak wedges for launching cradles

Joe said it took 16,000 oak wedges when building the cradles for the launching of the Chevron Tankers in the mid-70's. These wedges were used for hull leveling and adjustment of timbers while the ship was on the launch ways. Up to the time he died in 1960, Charlie Wahl had been making wedges by recycling hardwood cribbage that came in with carloads of steel from the midwest and eastern part of the country. These sources used a cheap grade of hardwood cribbing, but nevertheless, excellent for shipyard wedges.

But when Gunderson began buying steel from western sources instead of the eastern mills, we lost out on the good oak cribbing. These new sources used pine cribbage, unsuitable for the wedges. The pine was too soft for the punishment the wedges took when they were sledge hammered into cracks between timbers to level a ship.

As a result of the softer pine cribbage, Joe ordered 2,000 board feet of oak to make wedges with. Joe related, "When the invoice came in, Al Gunderson jumped on Benny (Lundquist) and Benny jumped on me, then Al jumped on me. The damn stuff was Oregon oak anyway, and not too good." Joe and I (Benny) were shocked that Al would raise a fuss on the first ever purchase of oak for the wedges. Al was unaware that we had been getting the wedges for free. Al calmed down considerably once we explained we'd been getting the oak wedges for free. Joe kept after me to get his good wedge supply back again.

I tried the docks in Portland to see if they were receiving eastern steel with the hardwood cribbing and, sure enough, they had received tons of the stuff, had no use for it and were shipping it to the dump. So over time, I arranged to pick up several loads of it free, except for a case of liquor to show appreciation for the favor. Later on, the supply of steel changed again to include the hardwood cribbing.

Launching release mechanism

But the greatest of devices Joe created was the side launch release mechanism in Ways #4 where the big ships were built. This ingenious mechanism, a series of levers and cables, prevented premature launchings but accelerated launchings when they were ready to go. Many office folks including me, have long wondered how the launch release mechanism worked. Joe agreed to give me a first-hand explanation, so on the sun-drenched day of August 3, 1992, he met me at the office of Gunderson Inc. for a tour of Ways #4.

As we strolled through the plant, it was a beehive of activity. Joe is such a popular guy that we were stopped several times by friends greeting him and wanting to know what he was up to these days.

I hope this description will clear up some of the mystery of this contraption:

Before Ways #4 was built and to see what other yards did to launch their ships, Joe, Thad Stevens, Plant Superintendent; Elliot Higgins, Engineer; and Ray Thomas, Marine Superintendent were sent to ship yards in Vancouver, British Columbia and Manitowac, Wisconsin. Joe and Ray went on to Avondale Shipyard in Avondale, Louisiana. Joe and Ray didn't receive a warm welcome at Avondale, but did finally get to see the yard's launching ways. However, they couldn't take their cameras with them. Joe said that didn't matter as long as he had his ruler in his pocket. Nevertheless, they all came home empty handed. And that is when Joe came up with his idea. He made a wooden model of it then gave it to Ron Schoenheidt to engineer. Schoenheidt told Joe that it was his most fulfilling engineering project.

Leighton Johnson, Chief Engineer, also went to Avondale to inspect their side launch ways. No doubt he gathered a wealth of information on ways construction while there.

When Joe and I finally arrived at Ways #4, we climbed down into the pit where we could put our hands on and examine in detail the various parts of the launch release mechanism.

Generally, Joe's release mechanism consisted of a heavy steel anchor plate, set in concrete at the head of each bent on the ways. (A bent was a set of two skid rails on the ways on which sat one of a ship's several cradles. The "skid rails" were the greased timbers down on which a ship's cradle slid during a launching.) Every anchor plate was equipped with two levers, each of which rotated around a cam that pivoted. Joe called this "the gripping mechanism". Then there was a launching cable for each lever. When the socketed end of a launching cable was gripped between the lever and cam, it was there to stay. (Joe called the levers "golf clubs" because of their shape.) Only when the lever rotated away from the cam, was the cam permitted to pivot and release the cable.

There were 26 bents used for a 650-foot long Chevron Tanker, thus there were 26 anchor plates, 52 levers and cams and 52 launching cables.

One-half of the levers to the left of the center anchor plate were joined together by tie rods, and the other half of the levers to the right of the center anchor plate were likewise joined together. Then the two groups were tied together at the center anchor plate with a short piece of wire cable. This wire cable held all of the levers and cams and launching cables in a locked-in position until time of launch.

To each of the outer or far ends of both banks of levers and tie rods, a heavily weighted cable was attached. The weights on the opposite ends of these cables were suspended over a pulley within a steel frame. These weighted cables could only function when the cable holding the two banks of levers together was severed. When that cable was severed, the heavy weights hanging over the pulleys were allowed to fall and their force jerked open all the levers at the same time, allowing the cams to pivot and the hold-back cables to fall free, releasing the fulcrum arms at the bottom of the launching skids and freeing the ship's cradle for launch.

When the mystery of this marvelous device began clearing up in my mind, I thought of the tension and excitement in the air during the many launchings I had witnessed and that Joe and his carpenters had sweated out.

There was a special ceremony at every launching. The ship's owners were introduced. The customer praised the workmen and the shipyard for the quality of the work. After an invocation, the sponsor of the ship, usually one of the owner's wives or daughters stood poised with a champagne bottle, waiting for that magic moment, the christening.

Receiving a signal that the launch was about to begin, the sponsor called out, "I christen thee", gave the ship a name, then broke the bottle over the ship's bow. At that precise moment someone severed the center cable with a hydraulic guillotine shear, releasing both banks of levers. The levers, in turn, released the fulcrum arms and allowed the ship's cradles to slide down the ways.

When the side launch mechanism was originally activated in 1968, the two banks of tie rods were connected together with a steel plate that had to be burned in two with a cutting torch to activate the launch. This process took too long. After a few launchings a short piece of cable was substituted for the plates. The cable was easily severed with the guillotine shear. This sped up the ceremony.

Joe described the greasing of the ways at the beginning of ship construction and last minute preparations for launching:

"During construction of a ship, the standing way timbers (skid rails) had a base coat put on, then a slip coat and grease plates were put on standing ways. (The base coat was a heavy grease with a wax-like texture, and the slip coat was a slippery grease.) The cradles that the vessel was built on were put in place, starting at the lower end with the cradle that had an H-Beam in front of it. The hold-back straps were bolted into the H-Beam with four 1" bolts on each side. After the burning and welding was done, the fulcrum arms (one for each side of every cradle) were raised and hooked up to the cables that went up to the upper end of the ways and fastened into the release mechanism."

While the ship was being built, however, it was held up on the ways mainly by the steel hold-back straps attached on one end to the concrete foundation of the ways and on the other end to the cradle skids.

Also, several hundred grease plates had been inserted at four foot intervals in the crack between the cradle skids and the base launching rails on all the bents to form a greaseless, non-skid support for the ship. A few days before the launching was to take place, all of these plates had to be removed with a push-pull come-a-long, a double acting hydraulic device. Removing the plates allowed the cradle's skids to fully contact the greased surface of the way's launching rails. Since the grease had been applied at the beginning of construction, it had hardened and would soften up only as the weight of the ship created friction and heat.

Joe got to the last minute preparations, "The morning of the launching, the hold-back straps each had their four 1" bolts removed and the straps lowered to the ground. The cables from the fulcrum arms to the release mechanism were torqued (tightened) to 100 pounds, but in loosening the four bolts the cable still would stretch, so it had to be done systematically.

"When the hold-back straps on each side of all the ways were unbolted, they were done so with great caution, by a man on each side of every cradle. If one man untightened a bolt too fast, he was told to wait a little for the other to catch up. This operation had to be synchronized so that the cable on one or the other side of the cradle would not become over stressed and break, due to unequal stretch. Every one of the bents had to have their hold-back straps unbolted simultaneously. After the hold-back straps were removed, only the fulcrum arms and cables held the ship on the ways and she was ready for the launching ceremony."

When Joe was asked if he had some engineering background to be able to figure out these superb ideas, he replied, "No, it's just common sense."

After Joe and I finished our study of the launching device, we sauntered down along the river bank and looked for vestiges of the old Marine Railway, and the three other shipways (No. 1, 2, and 3), but not much was left of them except some rotting pilings where the ways jutted out into the river. All of the buildings of those old ways were converted into railcar fabrication shops.

We visited Joe's old carpenter shop. He was quiet and reverent and said, "It's still the same, not much has changed."

Gunderson's longest career – Michael T. Illias

At the end of 1991, Mike retired from Gunderson Inc., the successor company to FMC's Marine & Rail Equipment Division, Gunderson, Inc., Gunderson Bros. Engineering Corp. and Gunderson Bros., all of whom were his employers for a

continuous stretch of 48 years. No one else has worked as long for those companies as Mike did. It will be tough to match that record.

Mike was born in Linnton, Oregon on August 30, 1926. Linnton is a suburb of Portland. It's on the west side of the Willamette River a mile or two downstream from the St. Johns Bridge.

First jobs at Linnton plant

Linnton was the same home town of Gunderson Bros. where Mike began his long career on February 17, 1944. His first job title was boilermaker's helper at 97 cents an hour.

He helped Henry Baum, Sr., a blacksmith, make sheaves for pulleys for gravity davits. Davits were devices that raised, stored and lowered lifeboats to and from their mother ships. Then, with Louie Herder, a sheet metal worker, his job was taking two parts of the sheaves and riveting them together.

He also worked on a press brake, helping Virgil Roseman form steel plates.

One time, he asked his boss, Henry Baum, Jr. for a raise, and Baum said, "Turn around and I'll give you a good one." (In the rear with a boot)

Becomes a painter

He then became a spray painter, painting ramps for landing barges and skids for life rafts that were made at Linnton. He also spray painted logging trailers. His paint boss was Van Allen. Allen kept insisting on mixing Mike's paint, but he got it so thick, Mike couldn't get it to go through his spray gun. From then on Mike mixed his own paint. Mike also worked on installing forged dogs (handles) and rubber gaskets in water tight doors, then he painted the doors afterward.

After receiving red lead poisoning from painting, he was given a position in the tool room.

Mike said his 60-year-old father, Stefan, worked for him for a while as a helper at Linnton.

His war service

His career with the company was interrupted in July, 1945, when he was called to do a six month stint in the Army Air Corps at Sheppard Field in Wichita Falls, Texas. The war had ended while he was still in boot camp. Since he was disqualified for overseas duty because of eye problems, he was discharged in 1946.

Returns to GB as shipfitter and painter

When his army service was over, he returned to Gunderson's Front Avenue plant as a shipfitter. One of his first jobs was forming steel on an ancient hydraulic, water press.

Then he became a painter again. One of his first jobs as a painter was stripping off old paint from Chet Gunderson's boat, the Zimmie, and rubbing down its wood hull. He later applied copper bottom paint to the hull.

Mike was then transferred upstairs to the lifeboat division, in the Front Avenue building, where he was put to work testing Foldcraft boats for leaks and caulking them if he found any.

Moves to tools room and begins career as buyer

Soon afterwards, he became a tool room assistant to Clarence Barto, Tool Room Foreman, where he remained for 12 years.

From August 1960 he was a leadman in the tool room until he moved into the purchasing department office in 1965.

While Mike worked in the tool room, his purchasing ability developed. He helped with the steel buying, by accumulating the requirements for steel from bills of material that were issued by engineering. He determined the shape, size and quantity of steel needed, and his take-offs were used in buying both local and mill steel. He also dispensed welding rod, and in about 1952, he began buying it as well as steel.

He said he remembers buying steel from U. S. Steel Corp. and placing orders with Bruce Ward, Bill Tagmyer and Louie Kitchen. Ward later joined Gunderson Bros., became its president and eventually, with William Furman, bought the company. Tagmyer also was employed by Gunderson for a time.

Mike's problem with Jim Childs

I remember a time when Mike became very alarmed that he might lose his job in the tool room. The shop superintendent, Jim Childs, became very critical of Mike's vision and reading ability. Mike simply couldn't see. When Mike complained of the situation to me, I suggested he see Doctor Lyman, whom I thought could help him. He agreed, then saw Dr. Lyman, who prescribed eye glasses, and Mike's problem was cured.

Asked what were his most unusual memories of his years at Gunderson, Mike brought back a few thoughts.

He sometimes got into mischief. After lunch one day, he and one of his buddies filled a fellow worker's lunch box full of steel bolts and nuts. The lunch box was so heavy its owner couldn't lift it.

Then, another time, Mike and Jack Robey jacked up someone's car and put wood blocks under it. Mike said that this kind of "horse play" wouldn't be tolerated these days.

He remembers the 1950's when there was six inches of snow on Chet's house boat roof. Chet Gunderson sent him and four others up onto the roof to shovel off the snow so the roof wouldn't cave in.

Mike nearly left Gunderson

The closest he came to leaving Gunderson was during 1952 and 1953. Business was bad and there were only 35 to 50 people working in the shop. In an economy measure designed to keep labor costs down, yet keep as many on the payroll as they could, the Gunderson brothers asked those remaining to lay off work every other week. Mike did this. He took turns working every other week with Ray Kinchloe, Gunderson's oldest living retiree, who is now in his 90's.

Mike feared that he would be laid off permanently, so he began looking for another job. He took an examination to become a fireman. Then he took and passed a postal examination. The U. S. Post Office called him and told him he had a job, but to take it he would have to take a cut in wages, so he stuck it out with Gunderson. Soon, Gunderson became busier and Mike's livelihood was reassured. Gunderson very nearly lost the services of Mike, a valuable resource.

Mike compares Al and Chet

We asked Mike the question, "You worked with the Gunderson brothers, Al and Chet, for many years, what was it like?" He said they were unusual men. Chet was a common man. Sometimes he came to the plant in hip boots to see that a certain piece of equipment was installed to his liking. "He was a sidewalk superintendent," Mike said. Al was just the opposite. He was an "inside man".

How the place changed over the years

Asked about how the facilities had changed over the years, he said that, in the late forties, the place was just a swamp and soon all of the property was filled with sand and we ran out of room.

He remembered that we used the street as a warehouse. I recall that, too. We had piles and piles of steel plates and structurals crowding the right-of-way on Front Avenue. It's a miracle that the city didn't come down and ticket us for this infraction.

Mike rises to Purchasing Manager

In 1965, Mike became a Buyer for the purchasing department and worked in various buyer classifications until he was made Senior Buyer. He was Purchasing Group Manager of Maintenance Repair and Operating Supplies (MRO) at the time of his retirement.

In addition to Mike's MRO responsibilities, he also purchased welding rod, wire and gases.

During 1979, Marine & Rail Equipment Division's best year, Mike bought over 3 million pounds and $2 million-worth of welding wire, electrodes, flux and copper coated scarfing carbons. This was a significant fete considering the scarcity of this material during that period.

He was an expert at parts ordering. He bought thousands of parts in hundreds of varieties. He knew the part numbers by heart, where to get them and how to get them on time. Especially critical was his ability to keep the plant supplied with welding parts, they were very scarce.

For someone so persuasive, Mike had a lot of friends among his suppliers. Many of them attended his retirement party to wish him well.

Mixed fun with work

Mike was a work-a-holic. He was always prompt at getting to work, but he worked many hours over his regular day. What he didn't finish at work, he took home with him at night. For that he has earned the highest respect from his associates. He thinks he should have been given more help throughout the years, but the Gunderson bosses were always taskmasters and they were constrained by the owners to keep the company's overhead below the danger point. Like Mike, many of them worked long hours and took their work home habitually.

Mike always mixed his hard work schedule with a little fun. During the Christmas holidays he dressed up as Santa Claus and spread the spirit about the office. Then at the Retiree parties he and Mrs. Santa Claus (at times, his wife, June, and at others, Julie Ward,) passed out the exchange gifts brought by the retirees.

Mike made the cover of the June-July-August, 1983 issue of the *Torch & Stinger*, for his participation in "Bike to Work Day" on May 11, 1983. He was shown biking to work in style, riding in a bicycle ricksha operated by Carol Casey, owner of City of Roses Mini-Cab Service.

Mike's retirement party

Mike was honored with a special retirement party at the Portland Golf Club. He was showered with gifts from his associates and supplier friends. The purchasing department presented him with a video camera. The shop made him a weather vane out of aluminum. Plate Shop Supervisor Dennis McCormick gave him a "Rube Goldberg" nut cracker which really worked.

Gunderson President, Clark Wood commented on Mike's history and presented him with a brass ship's clock.

Chairman of the Board, Bruce Ward and Greenbrier President Bill Furman presented Mike "a certificate good for two years of service to bring his total years at Gunderson up to an even fifty." Will anyone ever top that? They also gave him a gift certificate for travel.

Finally Bill Galbraith, Vice President of Marketing and Sales for the Greenbrier Companies dedicated to Mike an oil painting by artist Michael Gibbons that will hang in his honor in Gunderson's lobby. The painting is the artist's version of the shipping track on Main Street – a location familiar to all Gundersonians, and is titled "Rolling Stock".

One's success depends on loyal and hardworking associates. I'm fortunate to have had Mike as one of mine. Without his dedication and skill, and that of many others like him, who knows if Gunderson would be what it is today?

Mike and his wife June live in King City, Oregon.

Leighton W. Johnson

Gunderson's growth resulted from precious contributions made by its people. One of these people, Leighton W. Johnson, Chief Engineer, gave a special boost in elevating this institution above mediocrity. If a list of "Corporate Treasures" was compiled, Leighton would easily qualify.

A diversified, good natured engineer

It's evident that he was versatile in his profession. Throughout his Gunderson career, he designed and engineered barges and boats, elevators in parking machines, Swedish gang saws, life rafts, railroad cars and saw mills. If some new product needed developing, like a plastic paint kettle or steam cleaner, Leighton was ready to tackle the project. In addition, as if he wasn't busy enough, he prepared most of the winning bids on such diverse projects as the McNary Dam Spillway Gates and the FLIP, referred to later in this chapter.

Leighton was never controversial or cantankerous. He always wore a smile and a pleasant countenance. He was persuasive without appearing to be forceful. I very seldom ever saw him lose his cool, but I must have tried him severely at times. Everett B. Hill told of the only occasion he knew of that Leighton displayed anger. (See Footnote 1) I know of one or two occasions when he bristled at Al Gunderson. Otherwise, he always seemed very easy-going and relaxed.

Leighton's early history

In 1934, Leighton received a Bachelor of Science Degree in Engineering from Stanford University. Then, in 1969, he obtained a Masters Degree in Mechanical Engineering and Business Administration from Oregon State University. Leighton came to Portland from Grand Coulee Dam in 1941. Shortly after Pearl Harbor in 1942, Leighton left the Bonneville Power Administration, where he had been an engineer, and joined Gunderson Bros. at its Linnton plant as a Junior Engineer. He was hired by Thomas J. (Tom) Larsen, the plant manager at Linnton. Only Leighton and one other draftsman (name unknown, maybe Richard Councilman?) were "working on the boards." William Shoemaker joined them in about 1942 just before they were all moved upstream to the Front Avenue plant when it was completed in 1942. He transferred there to work

for Stanley S. Baier, who was Chief Engineer in charge of all defense work for Gunderson Bros.

When World War II ended, Baier left the company to found his own company and promote the sale of his watertight scuttle which he invented during the war years. This scuttle was used on a fishing vessel that Baier designed and Gunderson built during 1945. The vessel was the YAQUINA sold to the Yaquina Bay Fish Co.

Becomes chief engineer of Gunderson

Leighton was chosen by Al and Chet Gunderson to assume the Chief Engineer's position which Baier vacated. He held this position until 1965 when FMC Corporation bought the company. According to Leighton, his title was, "more or less in limbo," during the early FMC experience when Robert E. "Bob" Gunderson was about to take over as president of the company. In January, 1967, when Bob perished in a tragic plane accident, a management reorganization took place, and Leighton asked for and became the consulting engineer for both railcar and marine engineering.

Just before the accident, Gunderson had brought in Robert J. Landregan from Chicago, Illinois to serve as plant superintendent, but in a short time, had created separate engineering departments – one for railcar engineering and the other for marine; and had installed Landregan as chief of the railcar engineering and John H. Hohler as the head of the marine.

The bulletin board

After Leighton retired in 1975, and for many years afterward, I always smiled when I read an announcement on the bulletin board in the engineering department, written in chalk. It said, "Leighton Johnson will be here on Tuesday, (a given date and given time)." It was an admonishment to all the engineers to catch him while he was available and partake of his dispensed wisdom. I watched the bulletin board for his appearances, storing up my own questions for those occasions.

Since his retirement, Leighton has been associated with Van Gulick & Associates at Lake Oswego as a consultant.

Leighton told me that his most interesting and arduous consulting project during his retirement was with the Pullman Swindell Corporation in Algeria. He was in Annaba, Algeria for six months, where he was a rail freight car consultant in the engineering department. He also had some engineering projects with Western Machinery Company before they closed their doors. These involved some fish screens on the upper Columbia River.

The boss's ticket

Alvin E. Gunderson had a favorite phrase that he used to describe a prime circumstance or event. He would say of it, "That's the boss's ticket." I believe the following excerpt of Leighton's February 1993 letter to me pinpoints the "Boss's ticket" insofar as a prime, key event in the history of Gunderson which occurred in late 1959 or early 1960:

"My first exposure to railroad freight cars was the underframe jobs for Pacific Fruit Express. Since we were successful in building this part of a freight car, Al and Chet (Gunderson) became more interested in building an entire car. We soon had an opportunity to bid on a drop bottom gondola car for the Union Pacific. When I saw the plans for the car (I) noted that it was riveted construction. The plant had some poor experience with riveted structural steel for bridges. If I recall correctly an underbid job on

this type of work and the poor performance of the shop led to the departure of a shop foreman.

"In any event Al told me to go ahead and prepare a bid on this car for Union Pacific. I may have told him that if successful we should make every effort to change as much as possible of the design to welded construction.

"I should insert here that very few of the railroad cars we built were original design by the engineering department. The two exceptions were the Black Mesa and Lake Powell 125-ton coal cars and one or two scale cars for checking railroad weigh scales. (See Footnote 2) All other cars were plans furnished by the respective railroads from which the engineering department endeavored to make changes principally in welding design or in the use of press brake formed steel that would eliminate welding.

"Returning to the U. P. drop bottom gondola, we were successful with our bid for Gunderson's first entire car. As I recall I traveled to Omaha with Al to see what we could do about changing some or all of the design from riveted to welded. I met with the mechanical department and Al talked with the higher officials. The end result was no dice on changes in the design; however Al did secure a promise from the Chief Mechanical Officer (C. M. O.) that he would visit the plant and perhaps discuss what we wanted to do.

"My very first visit in a private railroad passenger (car) occurred when the C.M.O. came to Portland. Al and I met him there for lunch. I was prepared to discuss with him the use of the Huck (2 pc. rivet bolt) which you, Ben, had secured some information on the use of same as well as welding of the side stiffeners vs. riveting. As I recall the conversation, he offered to Al the opportunity to back out of the job, if we thought it too difficult. He probably had in mind that U.P. could fit the cars into their work schedules at Omaha. Al turned down this offer, which later proved to be a sound decision, as it launched Gunderson into a favorable position with Southern Pacific. He turned us down on welding but listened favorably to the use of the Huck lockbolts, which we did use where it was most difficult to drive hot rivets. He also promised to have on the job two of their best car inspectors. They were a great help to Ed Brumley and Chuck Anderson who were the foremen on this job. When the job was finished, one or both of the inspectors (as per Ed Brumley) said to them, 'You, young fellers, have done a great job but our advice is to give up this work and go into real estate or something else.' As you know they are still in the plant to this very day.

"Sometime later, Southern Pacific (S. P.) gave us the opportunity to bid on flat cars. Again we were furnished plans of a riveted design. I proposed a welded design in which the center sill would be welded up of plate steel using the submerged arc welding process. You may remember the name of the salesman for Union Carbide who gave the shop a lot of help in this respect. I also recall that Al and I took our proposed welded design to San Francisco and were successful this time. I found the S.P. mechanical engineers to be knowledgeable of welding. This is not to discredit the U.P. engineers, because both Al and I learned from our private car visit with the C.M.O. that he was the one who made all the decisions."

The FLIP, most acclaimed project

According to Leighton, one of the most successful and widely acclaimed projects ever attempted by our company was the FLIP (Floating Laboratory, Inverted Platform). This vessel was built in 1962 for the Marine Science Laboratories, Scripps Institute of Oceanography, branch of the University of California near San Diego, under contract to

the office of Naval research. Its purpose was to perform under-water acoustical and other research using cameras, instruments, television and other equipment.

While at sea, the vessel which was 355 feet long and 20 feet in diameter at its aft end, could turn from its horizontal towing mode to a vertical position, flooding its long aft section with sea water, leaving its four-story machinery house and laboratory section above the water. For towing purposes, the house was shaped like a ship's bow. FLIP accommodated four persons and carried enough provisions for two weeks. When the ship was inverted to its vertical mode, there was an elevator which ran down to the aft end which was 300 feet under water. The elevator carried the various scientific equipment used for underwater exploration.

FLIP machinery flops with gravity

One of Leighton's challenges on the FLIP project was to design and mount all machinery, including a heavy engine, on gimbals which allowed the machines to pivot, with gravity, and remain in a horizontal position even when the vessel was tilted. Ladders were built for both the vertical and horizontal positions.

The parking machines

According to Leighton, an automobile parking machine with the name, "File-A-Way", finished in 1955 after about two hectic years, was the most difficult engineering project he was ever involved in at Gunderson. "The first concept brought to us by Allen Bigeler, its inventor, was the one we should have built, but there were patent difficulties which discouraged Chet Gunderson from building it," said Leighton. Bigeler came in with a second version and Leighton was instructed to design and build it. One of Leighton's engineering associates, Charles Wingrove, spent several months in Camas, Washington, working with friends of Bigeler on the design and detail drawings.

When File-A-Way was finally built and installed at the downtown Portland location, Gunderson's George Miller was installed as its mechanical manager and it turned out that he was the only person who could keep it running. Today, Leighton and George reminisce occasionally and have concluded that, with the sophisticated computer controls and also miniaturization available, it would have been a much more maintenance-free machine. When Miller retired, there was no one who knew the machine like he did to keep it running, so expenses were soon more than income. Leighton believes that there are few, if any, parking machines like File-A-Way because maintenance expenses as well as operator expenses caught up with all of them.

Concurrently with the File-A-Way parking machine era, Chet Gunderson took an interest in auto parking machines and he heard about a parking wheel in Jackson, Mississippi. Leighton was sent there to take photos and copy the design. It could park about 10 cars. Leighton and his group designed one and the company built it. The machine was tested in the shop with W. E. "Billy" Love's new Buick company car but it was dropped out of its cradle and "totaled". Bill was on a vacation trip at the time. He was chagrined as to why we hadn't used an old second-hand car for the tests.

Leighton given defunct file-a-way corporation

In the mid-to-late 1970's, after the two brothers died, the corporation then set up to cover the File-A-Way operation was closed after a loss. From the beginning, Leighton had served that entity as a silent and unpaid director of its board. On its closing, Charles H. Sikes telephoned Leighton and asked if he would like to have it. (The File-A-Way

Corporation) Leighton took over the corporation and has used it as a vehicle for his engineering consulting business.

Was master of ceremonies

During Leighton's career, until about 1965, he not only served in his profession, but he became a Master Of Ceremonies for the company during such functions as ship launchings. Al Gunderson had been officiating at these launchings but one day called Leighton into his office and told him to take his place. Al gave Leighton very little information as to why he no longer wanted to do it. Leighton had been attending the Toastmasters Club and became a prize-winning speaker, well qualified to be the Master of Ceremonies in Al's place.

Footnotes

(1) See Chapter No. 17 , Everett B. Hill

(2) Later, beginning in 1971, we began designing complete new cars. See Chapter No. 23,"Impact of Impack" for an account of these new car designs.

Thad Stevens from Oolagah, Oklahoma

Thad Stevens contributed 36 years of his life as a builder of Gunderson. He retired December 27, 1979.

Began as carpenter on life rafts

Stevens' career with Gunderson began in 1942 as a carpenter, about the same time that Charlie Lynn joined the company. One of the earliest of Thad's jobs at Gunderson was working with boat plywood. Thad was a very young, handsome, dark-haired carpenter. He drilled and cut holes in the plywood sheets that were used in the construction of Gunderson's "Porpoise" life rafts. He made and installed plywood doors in the life raft well decks. In 1943, Stevens took on the responsibility for lofting of boats and ships.

The *Torch & Stinger* of August 1971 reprinted an article and photograph from the *Gunderson Gunner*, issue of June 22, 1944 and asked, "Guess who?" It was a photo of Thad Stevens working on the life raft plywood. The article said, "The gentleman in the photograph doesn't work much with his hands any more, but his experience, knowledge and infinite wisdom are still a very important part of our plant organization. Can you guess who he is?"

After World War II ended, he was seeing everyone being laid off so he took a job with the navy as an inspector. Two years later, Gunderson's work began to pick up and Leighton Johnson re-hired Stevens with full reinstatement. In the ensuing years he worked in the loft, then in various leadership positions until he became Plant Superintendent.

In about mid-1965, Al and Chet Gunderson sold their business to FMC Corporation. Chet retired from the business and Al became President of the company. Immediately, on becoming President, Al made sweeping changes in the plant management. N. L. (Nick) Thomas, who was Plant Superintendent up to that time left the company and Al installed Thad as Superintendent. Prior to that Thad had been a foreman in various plant activities.

Capsule of Thad's career

The following is the story of Thad's career as prepared by the late Sid Pidgeon, a retired Scheduling Engineer. The story was reported in the *Torch & Stinger*, issue of February, 1979:

"Thad Stevens started out with Gunderson Brothers in 1942 as a carpenter. He and Charlie Lynn arrived here about the same time and struck up a friendship that has grown and mellowed to this date. Their families exchange Christmas dinners every year dating back to 1942.

"After about a year, since no one was available to loft boats, Thad took on this responsibility and set up the mold loft on the mezzanine over the 4700 Warehouse. They were building 22' to 24' lifeboats, LCM 6's that were 56' long and weighed about 30 tons. They also built 65' tugs for the U. S. Navy and for Turkey.

"The plant at that time extended south to the end of Fritz Dummer's machine shop. South of that lay swamp. Soon, the Gunderson's arranged to buy some of the swamp land from Portland State University.

"After World War II they laid off all but 6 or 7 men, so that encouraged Thad to accept a job offer from the Navy as inspector with a GS-11 rating.

"After a couple of years, work began to pick up at Gunderson's, so Leighton Johnson looked up Thad and hired him back with full reinstatement. Thad ran the loft for 3 or 4 years, during which time he gradually absorbed the whole shop. They were building logging and sawmill equipment. From there they progressed to fabricating steel girders for buildings, bridges, gates for the dams at Priest Rapids and Detroit Reservoir, as well as the west approach to the Marquam Bridge.

"Marine work began to pick up in the late 50's and early 60's with construction of Scripps Howard research vessel FLIP and the then huge dry dock for the Port of Portland. Barges became the thing and he built large numbers for Umpqua, Crowley, Halvorson, etc.

"As the facilities grew and the number of ways went from 1 to 4, they built the side ways to handle the largest vessels anticipated on the river – 650' – so Thad has seen this company go from a handfull of people to almost 2,000, with annual sales of almost $200 million.

"Starting in 1958, the company started building underframes for the Southern Pacific, and in September, 1960, built 200 gondolas for Union Pacific. That really turned the plant on to railcars, culminating in 5,000 cars being shipped in his 36th and current year with us.

"Thad and Margie confess to cold feet in the winter here in Oregon, so they will be headed for Palm Springs in January to renew their tans. Thad won't stay too long, for their marina and boat at Gobel will beckon them when the spring Chinook run starts. They are both ardent fishermen and thoroughly enjoy the challenge of the Columbia Bar and the fish beyond.

"Thad has left his mark on our plant. He is endowed with what I like to call production common sense. Not one for grandiose schemes and costly frills, he kept our production operations simple and straight forward. This bit of Scotch approach allowed us to expand yet still operate as a financially sound enterprise."

A reputation built in steel

In the August 1975 *Torch & Stinger*, Thad was featured in one of FMC Corporation's transportation equipment ads. The copy reads:

"A Reputation Built in Steel

"It takes a long time to build a reputation like that of FMC's Thad Stevens. Through youth to maturity; through every job, every position, through 27 years of fabricating steel, Thad has taken pride in making sure every job is done right. He still does. That's why he's FMC's Superintendent of Rail Operations.

"At FMC there are many men like Thad Stevens. There must be. It takes men of skill in a wide variety of occupations to design and build quality railcars, delivered on time.

"Let Thad Stevens work for you....."

An excellent photo of handsome, gray haired Thad accompanied the ad.

No costly frills for Thad

As Sid Pidgeon said, Thad Steven's style was to keep everything simple and straight forward with no costly frills. He was certainly that way with his associates. Like Al and Chet, he was another who would not accept the word, "No". He was one of the firmest, most persuasive men I knew at Gunderson. He never let one "get off the hook" on a promise. I remember some trying times when carbuilding material was slow in coming. Thad would make an appearance in my office frequently to check up on the material progress and expedite the missing material.

Though unrelated to Chet, Thad was a almost his carbon copy. He dressed impeccably and was a suave gentleman. Like Chet, Thad could see where a certain type of machine could make a difference in safety, cost and production. So he would call in a machinery salesman and find exactly the right one for the job. I must say though, unlike Chet, Thad didn't go much for used machinery by then, except when he wanted it home-made. Charles "Chuck" Anderson, Railcar Production Manager, told about Thad's creation of a "Swing Table" at the north end of bay two, which he had made in the plant. It was a visioned solution to the problem of how to shunt railcars from the north end of bay two back into the opposite direction in Bay I. (See Footnote 1) Like Chet, Thad had a way with the working men. He was a good boss and brought out the best in everyone he led.

Trio divines weighty solutions

In a letter of January 23, 1992, to me from John Hohler, former MRED Chief Marine Engineer, in response to a question as to how he and Virgil Hatfield correctly guessed the center of gravity of a huge Chevron tanker module, he wrote, "Guessing the center of weight of odd sections had been going on for several years, as this was much easier than calculating before we had computers. It started, I believe at about the time of the fishing vessels. Elmer Kunnas, my self and a third party, usually Thad (Stevens) independently, would go out and eyeball the section, mark the spot we thought was the exact center of gravity, and after that we triangulated those points for the final center. We were very lucky!"

Everyone loved and respected Thad the same as I did. Prior to his untimely death, Thad kept asking why Maxine (my wife) and I didn't "let our hair down" and take a trip with him and his wife, Margie. They belonged to a travel group and flew to every exotic place under the sun. But we never got around to it until it was too late. On November 11, 1980, at age 62, he had a sudden illness and was gone.

Footnote

(1) See "Ed & Chuck" in this chapter, for full details of this marvelous idea.

O. Ray Thomas

(After an interview with Ray and his wife, Avis, in their home in early 1992.)

La Princesa is crown of Thomas' career

One of Ray's most precious moments in the business, was the launching of LA PRINCESA, the third of four of the world's largest barges. She was a 580-foot long triple-deck trailer barge for Crowley Maritime Corporation, capable of hauling 374 trailers. Her loaded displacement was 17,400 tons. Her lightweight, 6,400 tons. She was 105 feet wide, and could barely squeeze through the Panama Canal when she was delivered to the Caribbean Sea.

Ray said of the barges, "I want to congratulate anybody that had anything to do with these barges. I've seen a lot of barges built and believe me, this is the best work I've ever seen, just beautiful work. If you keep this up, you'll have a lot of barges to build in the future." What a nice compliment, coming from this experienced builder and teacher of his trade. How proud his associate builders must have been when he said this to them.

Thomas' beginnings

This is a profile of O. Ray Thomas, one of Gunderson's pioneers, who knew how to manage men and machines to get things done. He helped Gunderson to become the enormous shipyard that it is. Though the marine facility is inactive today, it is a sleeping giant ready to be re-awakened when the next big order comes along.

Ray's first shipyard work was in 1941, before the war broke out. His first job was welding at Oregon Shipyard. In less than a year he was made leadman on the graveyard shift. On his first shift, he was given six men to manage. The next day he was given 22 men, none of which knew how to weld. He taught them all in about six weeks.

"Everything went along fine until early in 1945 when America invaded Okinawa," Ray recalled, "It was then that I was drafted and sent there. When the island was secure, it seemed like they let everyone come home, but new troops came there to be in on the invasion of Japan which didn't happen, thanks to Harry Truman and the atom bomb." He got home in 1946 and built a home for himself. He said material was very scarce but he managed.

He worked for a while in ship-repair for Northwest Marine Iron Works and also at the aluminum plant in Troutdale, Oregon.

Thomas joins Gunderson as welder

Ray joined Gunderson Bros. as a welder in 1947. His first job at Gunderson was "welding a bunch of beams for the Oregonian Building." All he could see ahead of him was about two weeks work, then he expected to be laid off. But it did not happen.

In a letter from Ray in June 1986 responding to a request to name some of his early associates, Ray said, "Now Benny, I won't name but very few names because I would accidentally leave out some very important names. It seemed that every man there knew his job so well it was no wonder that GB became known as the 'can do' shop."

There were some lean years between 1947 and 1952, Ray said, small jobs and odd jobs. Anything that was work was appreciated.

Ray Thomas oversees building of barges

In 1952 when Gunderson built 23-120 foot cargo barges for the Navy, he and Ralph Donaldson shared in overseeing the construction of those vessels. The two reported to

James "Jim" Childs who was plant superintendent at the time. "We would launch two barges a week from Ways I," Ray wrote, "A little ingenuity allowed this to happen. We would launch one near the middle of the week and one at the end of the week by playing "leap frog" with the cradles we built the barges on. It seemed incredible." It was incredible enough to allow Gunderson to land an order for another 33 a year or two later.

Ray said, of Jim Childs, "I liked the old boy. Yeah, I did." Ray told how Jim re-drew all of the barge erection drawings to suit construction. Jim had a cat in his upstairs office where he was drawing the plans. One day the cat jumped up on Jim's drawing board where the plans were and as Ray put it, "did its thing". Jim simply lifted up the plans and dumped off the mess and resumed his work.

Switches to tank work

In 1956, he worked for a year for Billy Love's tank department doing erection work in the field. He remembers going to Camas, Washington to tear down an old smoke stack and erect a new one in its place along with two tanks. He recalled that Love had a deadline on the job and that the only way he could finish it on time was to work 10 hours a day instead of eight without charging the extra hours.

Ray's version of the stack job follows:

"The stack was very simple. You see, the stack was 11 feet in diameter and we cut a hole at the bottom of the stack and built our floating scaffold inside. The scaffold could be raised and lowered at will. We used the scaffold to work from, letting the burned-off steel down (to the ground) on the outside of the stack and handling the new steel (up the stack) on the outside. Very easily, of course, we had to cut down all the old steel before starting the new one. This stack started at the roof of one of the big buildings and went up another 50 feet thereabouts. We used two winches to get the steel in place. One to bring it to roof top and the other up the stack."

He also built a tank for Billy Love down in Coos Bay, Oregon.

Tries hand at railcar building

In 1960 Thomas remembered working on building the 200 Union Pacific railroad gondolas, Gunderson's first experience in building railcars. Asked if he was the "top guy" on that project, he said, "Well, I was acting like it but I was never named it. I never got paid for it. Just a salary. A plain salary." He said, "My memory is rather short on this, but I do remember we pressed the bolsters and doors from steel plate. They made very good parts for the cars."

Ray prefers the marine part

Then came the years when Al and Chet Gunderson were feuding. One time, while Chet Gunderson was on an extended vacation trip somewhere, Al fired Nick Thomas, the Plant Superintendent. Ray had just come back from a fishing vacation and Al came to Ray and asked him to head up the plant. Al had a handful of keys to the plant and wanted Ray to take them. At first Ray refused, but "Al kept after me and kept after me" until Ray said, "I do like the marine part. Let me name a person to take the shop, so I named Thad Stevens." Al liked the arrangement, so that was the way it was for a short time.

Chet came back from his trip and was furious at Al's firing of Nick Thomas. He brought Nick back as Plant Superintendent, but not to the detriment of Ray. When Ray discussed Al's and Chet's feud and the new mix-up in the shop with Nick Thomas, Nick said, "Just pay no attention to them. And keep on doing what your doing." Everything worked out just fine. Nick ran the shop and Ray ran the marine end. It is believed Stevens

went back into the loft until 1965 when Nick Thomas was fired again by Al, this time for good.

Thomas made Marine Superintendent

Ray did not receive the title of Marine Superintendent until 1965 when FMC acquired Gunderson. It was at that time that Al Gunderson took over the presidency of the company and appointed Ray to the position.

Ray told a story about the time Gunderson bought a new "electric eye" burning machine. He believes it was the first of three Linde CM-100's that the company bought. Eddie Lundt was the machine's operator. The machine's electronic eye followed a drawn line on a drawing and guided its burning torch along the line permitting the torch to burn very intricate shapes out of a plate of steel. One time, all of a sudden, Eddie noticed that the machine's torch got off the line and was wandering aimlessly. Ray said, "Come to find out, a fly had lit where the eye was and the eye followed the fly." Ray vows, "This is true!"

The mean guys

Ed Brumley, current Senior Vice President Production and Manufacturing of Gunderson Inc. and Charles L. "Chuck" Anderson, Rail Production Superintendent, were remarking in a recent interview, about the time they joined Gunderson in the 50's. They remember how mean and tough the foremen were. Among those that "gave no mercy to a young guy in the shop" were Ray Thomas, Eddie Lundt, burning alley; Dorman Jackson, plate shop; Joe Huserik, carpenter supervisor; Ellsworth Gedde, marine; Johnny Young, a good welder who later went into material handling; and George Okeson, welder. They were all foremen to general foremen. When asked if this was true, Ray said, "Well, they were just getting the job done."

Thomas' most unforgettable job–The FLIP

Asked what was his most unforgettable job, he said it was the FLIP (Floating Laboratory, Inverted Platform). When FLIP was nearing completion and about ready for launching in 1962, Ray began to worry that the piling underneath the ways would break during her launching. He had looked at FLIP and had a feeling that she was too light at her narrow tubular end which tapered down like a cigar where it made a transition from a tube to a rectangular laboratory house. This area was the last part that would come down the ways. It was so light that it would not serve as a counter balance to the heavy end of the structure coming down the ways first. Ray asked Leighton Johnson, Chief Engineer, to look at the problem, and the next day they were putting braces and brackets in the suspected area inside the house and tube. Then Ray said, "They let me fill that section with water about a week before launching," so as to increase the weight there and achieve a better balance of weight distribution. When the FLIP was launched she went down smartly with no damage to herself or the ways. Avis, Ray's wife, said, "You see, in those days they flew by the seat of their pants, it wasn't proved or disproved, it was a first of its kind." With a chuckle, Ray told Avis, "That's right, you told that right!"

Ray's retirement party

When he retired June 1, 1979, after 32 years, he was Ground Superintendent of marine operations. Except for most of the tanker years and until he retired, he was Marine Superintendent.

His fellow marine workers presented him a coffee table made from an old ship's hatchcover. It was decorated with pictures of many vessels Ray helped to build. The first Gunderson railcar, and the only rail project Ray was involved in, was also embedded in plastic on the table. There was a plaque on the table which read,

"As you go through life
Two rules will never bend
Never whittle toward yourself
Or pee against the wind."

According to the July 1979 *Torch & Stinger*'s account of Ray's retirement party, Walt MacDonald, Marine Operations Manager, humorously attested to Ray's many years of wise experience: "Some people say that God spoke to Noah and said he needed an ark. So Noah went to Ray and the ark was built (without the help of blueprints). The ark landed on Mt. Hood and Ray walked off the mountain, and came to Gunderson Brothers."

"We built the ark," interjected Ray, "and then the engineering (department) came and made drawings, 'as built.'"

Ray was also presented with a wood replica of a scrapbox, filled with scrap metal and old tools. Ray was thrifty. He was often seen "rummaging through scrapboxes in an effort to salvage still usable tools," said the *Torch & Stinger.*

Ray's wife, Avis, was chosen to sponsor the LA PRINCESA's launch and christen her with a bottle of champagne.

Avis Thomas' tribute to Ray and workers

During the reception which followed the christening, Avis read a poem she composed especially for Ray's retirement:

"To Ray & You, Our Dear Friends!

"I wish you a wish for days all fair
-for ending showers & spring in the air.
-for bowers of flowers beside each door,
-for an apple to munch down to its core,
-for an apple takes care of your health you know
-for sauce or pie, now isn't that so?

"I wish you a wish for long summer days
-for time to forget your labor on ways,
-for time to forget clanking of hammer on steel,
-for rushing at work to lay a new keel,
-for straining of nerves as bulkhead on crane
-for first time is lifted to form the new frame.

"I wish you a wish for a beautiful fall
-for hunting or fishing if you get the call.
-for a bountiful harvest of salmon or trout,
-for family gatherings all about,
-for a special thrill as you launch the new ship,
-for a sigh of relief as it slides down the slip!

"I wish you a winter short and sweet
-for glowing firesides to warm your feet
-for friends and neighbors to gather inside
-for happy laughter where you reside.
-for love or labor has its own reward-
-for all these things 'I'll praise the Lord!'"

In the third verse of her poem, one can imagine that she remembers Ray's sigh of relief, when, in 1962, FLIP slid down her ways in 1962 without demolishing them! For sure, men like Jack Leonard and Bill Owens, Assistant Marine Superintendents under Ray spent many a week wondering what, if anything, would go wrong, but very little of any significance ever did.

An interview with Percy Wood

This interview took place at Percy's home on the East bank of the Columbia River, in Washington, upstream a little and just across the river from Portland General Electric's Trojan atomic energy power plant. The setting was beautiful and pristine. I imagine Percy spends much of his time fishing, or just sitting there, musing about his heartful of memories of his beloved General and friends. ("The General" was his General Crane – more about that later.)

Percy Wood, who had worked every day for 4-1/2 years during World War II at Wisco (Willamette Iron and Steel Company,) and had just retired, began his 25 year stretch with Gunderson on September 17, 1946.

Here's how he happened to come to Gunderson's.

You come with the crane

Chet Gunderson and James "Jim" Childs, Plant Manager, became interested in a 3/4 yard, 8-1/2-ton capacity General Crane that Wisco no longer needed, so they went to Wisco's yard to look at it.

Percy, the long-time operator of the crane, demonstrated it and they bought it for $4,250. It was up to Percy to deliver the General to the Gunderson plant down Front Avenue a few blocks. It was mounted on a rubber-tired chassis and could be driven over the highway.

When Percy arrived at the plant at about 3:30 P. M., it was nearly the end of the work day. Childs asked Percy if he would make just one lift for him on the new building that was going up across Front avenue from the main plant (The quonset building). Percy said, "Listen, I've been working 4-1/2 years and never missed a day–now I'm taking two weeks off. If you want the lift done when I come back off vacation, I'll do it then." But Childs was a charmer and insisted, "You make this lift and then I'll give you two weeks off!" After some haggling back and forth Percy agreed to come down to the plant and perform the lift the next morning, which was a Saturday.

Straw boss oversteps authority

On Saturday when Percy was preparing to make the lift and the load was all leveled–Percy and Joe Gredvig, the rigger boss, had seen to it that the rigging was all made and ready–there seemed to be a lot of workmen standing around watching it all when Percy

started the lift. Instantly, the back of the crane came up. The load was too heavy for the boom. Chet Gunderson, who was in the crowd, rushed up and began twisting down the elevator (a leveling device on the crane.) Percy yelled at Chet, "You bleep of a bleep, leave this crane alone while I'm running it!" Jim Childs warned, "Percy, do you know who you were hollering at? That was the owner of the business, Chet Gunderson." "I don't give a damn," Percy replied, "I don't want anyone interfering with this crane's operation while I'm on it!" Percy thought that he was about to be fired on his first day of work even before he began.

Later, after the lift was completed, Chet came over to Percy and said, "Young man, I want to apologize. I shouldn't have done that."

Late for work

Two weeks later on a Monday morning at 9:00 A.M., Percy came down to pick up his check for the Saturday morning lift and Jim Child met him with the admonition, "We go to work around here at 7:00 in the morning, not 9:00." Percy asked if that meant he was hired and Jim replied, "I thought you understood that," and handed Percy a check for two weeks' pay. It was apparent that Chet and Jim didn't want to part company with a man with a record like the one Percy had at Wisco.

General crane for sale

About the middle of September, 1986, Percy saw the self-same General Crane sitting out in the lot at Portage Marina on Marine Drive and went in to look at it. He asked if it was for sale and the owner said it was. The owner asked Percy if he wanted to buy it. Percy said that he wasn't interested in buying it. He'd only operated it for 25 years at Gunderson and, prior to that, many years at Wisco. The owner said, "Come in to my office, I've got to ask a lot of questions about parts and operation of that crane!" The price? $4,250. Exactly what Gunderson had paid for it 40 years ago in 1946.

Traffic cop put in his place

Percy had many humorous experiences to tell. One was of the time, in 1947, when he and others erected the Oregonian building and placed the huge floor beams over the newspaper presses five floors up. The last beam of the last day was 96 feet long and weighed 9 tons and was delivered to the lift site backwards. (Reverse of what it should have been.) So to get the shop out of a jam and to get on with the job, Percy sent a man to each end of the block (street) to stop traffic, then he picked up the beam with the boom, while another man with a long cable attached to the end of the beam, swung it around into its correct place. During the swinging of the beam there was only about two feet clearance from the building across the street! A policeman came up to Percy and asked him what was going on. Percy warned, "You'd better get moving. There's about 19,000 pounds that could topple over any second now." So the policeman disappeared in a hurry.

Percy was asked if he worked for Joe Gredvig, the rigger boss, when he started with Gunderson and he said that he worked "with" him. "I've always told everyone I work "with them" but never "for" them. It seems to have worked well for him as he has the respect and love of all of his former associates at Gunderson.

Tell Percy what to lift, not how much or how to

When Percy was hoisting the steel for the erection of the Federal Reserve building at S. W. 9th and Alder in the year, 1949, a cantankerous erection foreman was pretty obnoxious to Percy concerning the crane operation, and threatened several times to get

him fired. Word got back to the office, though, and in very short order Chet and Jim Childs arrived on the scene and warned the foreman to leave Percy to his crane operation. The foreman was instructed that he could tell Percy what to lift, but neither how to lift nor how much to lift.

Split second timing

During about 1951, Percy erected a conveyor for Publisher's Paper Company in Oregon City. W. E. "Billy" Love, Gunderson's Sales Engineer, cautioned Percy that he had only one-half hour to put the 15 ton, four foot wide, eight foot high, 45 foot long conveyor into place. It sloped up at 45 degrees over a roadway which was heavily traveled by sawdust trucks. Without promising anything, Percy went to work with the conveyor chute. At exactly the 30th minute, Percy had no sooner positioned the chute than the trucks began zooming underneath. Billy Love exclaimed, "By Gosh, Percy, you made it!" Billy Love, who was an estimating engineer and hated to lose a job, was elated because he always trimmed his bids boneless.

After finishing the conveyor job, Percy drove the General crane back to the plant. Up ahead, Ernie Fortune, a Gunderson driver, was in his flat bed truck which was loaded with tools and equipment. His rig also served as a wide-load warning vehicle for the crane. They were almost home, when at Pier One, on Front Avenue, Ernie's truck started steaming. It was late and everyone was tired; so Percy, his well of ingenuity overflowing, told Ernie to put his truck into neutral and that he'd push Ernie the rest of the way to the shop. So with the General as a pusher they made it into the shop by quitting time.

Percy related how he and his crew had to work around an earthquake during a job at Bonnevelle Dam in June, 1949. They were placing a 25-foot high by 24-foot diameter, horizontal storage tank on its foundations at Bonneville dam in the middle of June, 1949, when the earthquake shook the earth in snake-like movements and set the tank exactly one foot north of the bolt-hole circle of its foundations. With a D8 Caterpiller and a backhoe, Percy and his crew winched the tank in one motion back to the foundation. They overshot the placement by one inch, but with one try in the opposite direction, they moved the tank into place.

Homemade jib crane

Continuing in his innovative ways, Percy rose to the occasion again in 1948. While erecting an eight-ton steel log chute for a kiln at Weyerheuser's Springfield mill, the Whiting Crane he was operating broke down. Scouting up some six inch pipe, he rigged up a pipe leg hoist and picked up the chute and put it in place.

Rattle in car door

One day Percy and Albert Marlowe, foreman of the garage, were approached by Chet Gunderson who had just bought a brand new, black Cadillac Sedan. (Chet's cars were always black per Eddie Leo, his houseboy.) Chet said, "Come on and take a ride with me in my new car; it's got a rattle in it and I can't locate it." So Percy and Rauel Constantin (also a garage mechanic) went for a ride in the new car and after a few minutes in the car, Percy told Chet that he thought the rattle was in the right hand front door. So they took the car back to the garage and took the door apart. Sure enough, they found the cause of the rattle. It was a smashed beer can inside the door with a note in it that read, "You've found the rattle, you rich s.o.b., you." Chet grabbed the can and the note and was off in a cloud of dust to the Cadillac agency where someone got a good "chewing out" that day.

Easy does it

Percy continued, "Then there was the 150-ton emergency gate that we shipped to the Priest Rapids Dam in 1958. To install it we were required to hoist it out of the water off a barge and transport it 3/4 mile up a slope to the top of the dam. The original plan was to use 12 to 14 rollers underneath the gate and move it by hydraulically jacking it foot by foot over the rough terrain to its site." Billy Love had allowed Percy five weeks for this one. Percy didn't like the time frame nor the safety aspects of the job. He didn't know how he and his crew could stand the boredom for that long a period. Percy had his crew lay down two steel channels for a road bed for the rollers and towed the gate up the slope by using the winch of a D8 Cat. He cut the time from five weeks to a few hours. Walter (Walt) Anderson and a painter, Carl Morris–who is now an artist, were on this job with Wood.

Another use for fishing line

It seems that Percy Wood was destined for challenges. Sometime in the early fifties, Percy, "Red" Dunning (yes-the famous Portland radio-TV personality and musician) and Johnny Hemstreet, field erection foreman, had just about finished erecting a "50 to 60-foot high tower tank on six-foot diameter legs, for the city of Oakridge, Oregon on a cold day in January. It was near the end of the day. The wind was howling and it had begun to snow so heavily that they couldn't see nor hear the rigging signals they needed to give each other to finish bringing their rigging down safely from the top of the tank. This time Percy and Johnny used some more of their know-how. Percy went to his pick-up and removed a fishing reel from his tackle box and unwound 150 feet of the line from the reel. He gave Hemstreet one end of the line and tied the other end to his own thumb. Hemstreet climbed the tower and with the pre-arranged signals they got their rigging off the tower. The signals? One pull for "stop", two for "ahead" and three jerks for "back up."

Learning to weld in spare time

Percy was never one to fritter away time. Once in awhile while waiting for a lift he would ask Red or Johnny to teach him how to electric weld on steel. A proficiency certificate was required by the inspecting authorities before a welder was permitted to weld on most of Gunderson's projects. After only a few hours, Percy had it down very well, took his proficiency test and received his certificate.

When Gunderson repaired the dredge tending tugboat W. L. WILLIAMS late in 1958, it was one of several early ventures in upside down construction which permitted downhand welding instead of the more cumbersome, overhead welding. When the downhand welding on the vessel was completed and it was time to right it so that the remaining welding could also be made in a downhand position, Percy was to perform the righting with a line attached to a mechanical "donkey" (winch). When Joe Gredvig gave the signal, Percy pulled the lever on the donkey and with a jerk flipped the tugboat hull over a little too fast. Gredvig was a little upset and complained "I didn't tell you to turn it over that fast."

Percy remembered the time he put a steel boat in the Willamette River. It was about 27-30 feet long. With his crane he swung it out over the bank. It was supposed to be 1300 pounds but it felt more like 4000 pounds. Percy got out of the crane and approached the man in charge, he doesn't remember who, "Are you sure that weighs 1300 pounds?" The man said, "Oh, I forgot the 300 gallons of diesel in the tank."

The mechanics

Percy paid a tribute to those men in the garage who kept the machinery going through the forties and fifties: Rauel Constantine, Don Larsen and Al Marlowe. These three could fix anything anytime. Everett Hill and his group, including Bob Snyder, were the ones who kept the electrical motors, switches and starters working properly. There wasn't anything electrical that they couldn't fix up and get running in time when it was needed.

Percy retired again on September 17, 1971 after 25 years with the company which he likened to one big family. He said at age 63 he didn't want to climb up and down the stairways to the controls of the giant, new Clyde Whirley, which replaced the General and other cranes in ship work. One of his last lifts was the laying of the keel of the Chevron Tanker, OREGON.

Chapter 18

The Gunderson experience

By: Virgil C. Hatfield

The clean-up

In 1966, Gunderson executives recognized the need for better control and accountability of its material handling and warehousing activities. Until that time these activities were widely scattered responsibilities; hence, no one was really responsible; therefore, this important element of factory operations was seriously neglected. Consequently the company went to the outside labor market and hired Virgil C. Hatfield as Material Handling Manager. The new manager reported for duty August 22, 1966, and immediately took charge of material handling, warehousing and tool store operations. The first task was, of course, to get jurisdiction of all the workers involved in above operations. These workers were overhead crane operators, riggers, mobile crane operators, lift truck operators, warehousemen, tool stores attendants and the plant labor crew, over 200 people in all. After establishing a material handling and warehousing organization with clearly defined responsibilities and chain of command, the real work began.

The new manager was appalled at the condition of the plant; that is, the lack of good housekeeping practices and the terrible waste of valuable space. The entire plant was bogged down with surplus machinery, old lumber, launching cradles, obsolete jigs and fixtures, and an endless variety of material left over from jobs completed as far back as World War II. Despite the opposition of factory personnel, including the highest ranking superintendents and the plant Engineer, the new Material Handling Manager started an aggressive campaign to rid the plant of obsolete material and junk. The hardest part of the task was to change attitudes. After about three years most of the people could see the benefit of the cleanup policy and one could see attitudes changing. Some of the people were never converted. For instance, the Plant Engineer at the time was a hard core "string saver" and remains one to this day. After about three years there was a great deal of good natured kidding of the Materials Manager about his clean-up practices. He was accused of not leaving enough in the plant to rattle. After five years the Materials Manager was given his five-year service award at an awards banquet held at the Aero Club. In addition to the regular award, the Division President presented him with a "special" award which was a sculpture made from old tools, small pieces of steel, a spring, a piece of chain, pieces of pipe and other items all welded together to form a unique work of art. Allegedly, these were items recovered from the scrap bins. Presentation of this special award nearly brought the house down. The Materials Manager knew then he had won the battle and the sculpture sits in his living room to this day.

Plant security

In late 1967, responsibility for plant security was transferred to the jurisdiction of the Materials Manager; thus he wore two hats: one as Materials Manager and the other as Security Director. Up until this time, plant security was provided by a private security agency. Service was woefully inadequate and the majority of its officers were either unmotivated or incompetent. Some were dishonest. The first thing the new Security Director did was to cancel the contract with the private agency and to begin hiring Gunderson employed security officers on a salaried basis. Quite a few mistakes were

made in screening and selection of personnel, but eventually a fairly competent and reliable security organization evolved.

Up until the above change, the plant was wide open. Shop employees parked their vehicles all over the plant, often in the way of production and handling operations. Contractors working in the plant came and went without restriction or gate check. Consequently, there was an open invitation for anyone to take whatever they wanted. The Security Director made a bold move: he stopped the parking all over the plant, closed the entry gates and began checking vehicles in and out of the plant. Employees were also checked on a random basis as they clocked out to leave the plant. To say that the labor unions were outraged would be an understatement. But the policy remained in force and things eventually quieted down. Loss of tools and equipment was reduced from a flood to a trickle!

During construction of the assault boats for the Vietnam War, there was a great deal of sabotage to the boats at the outfitting dock. This was, no doubt, a result of widespread opposition to the war throughout our society. It was next to impossible to catch the person or persons responsible for the acts of sabotage which usually took the form of crimped tubing or cut electrical wires. Two production employees were finally discharged – more on suspicion than proof – and one warehouse employee was caught in the act of defacing a boat on the ways. He was also discharged.

During the winter of 1968, Oregon suffered a severe snow storm and freeze. A number of assault boats were tied-up at the outfitting dock in various stages of completion. The plant was closed due to the snow and ice. About midnight one evening the Security Director received a call from a security officer reporting that one of the boats was taking on water and was in danger of sinking. The Security Director called the Marine Operations Manager and a rigger who worked with the boats. The three of them met at the plant and began looking for pumps to pump out the water. Snow was about ten inches deep and frozen hard on the top. The pumps located were too small. Water was coming in faster than the pumps could remove. Finally, one of the security officers thought to call the Harbor Patrol of the Portland Police Department. The patrol came right away and with the large pump on their boat the water was quickly pumped out. The Marine Operations Manager discovered that the sea valve had been left open and the freeze broke the sight glass which allowed water from the river to rush in. About 4:00 AM it was all over, the boat had been saved from sinking. The Security Director/ Materials Manager, the Marine Operations Manager and the rigger went home feeling proud of themselves for a job well done.

The rigger knew how many boats were at the dock. Shortly after getting home and barely to sleep he awoke with a start. The number of boats he had seen that night did not match the number he thought was at the dock. He hurriedly dressed and went back to the plant and re-counted the boats. He was sure one was missing. He fount a pike pole and began poking around in the water. Sure enough, the boat next to the one which had been saved from sinking was resting on the bottom of the river under 15 or 20 feet of water. It was necessary to call in a river crane and divers to raise it. The sea valve on it was also open. This incident had all the elements of sabotage but we couldn't be sure. Maybe it was nothing more than worker carelessness.

When the Chevron tanker ships were being outfitted at Swan Island, bomb threats were a big problem. The calls would usually go the Portland Police Department or to the company's security department. They nearly always came at night. Outfitting was going on three shifts. When a bomb threat was received, the Security Director and police officers would meet at Swan Island, clear the ship of workers and wait for the big blast

which never came. This happened over and over again until we finally began to ignore the calls.

Several times over the years, private detectives were hired to work under cover to solve problems of sabotage, bomb threats and theft rings. The only thing learned from this practice was that in the real world, private detectives are not the same as the ones shown on television. Most of them can't track an elephant through three feet of snow.

The Chevron tankers

Construction of the tanker ships for Chevron Oil Company presented material handling department with its greatest challenge ever. The ships were built in sections, or modules as they were called, weighing as much as 150 tons, a few were heavier than that. The modules were built upside down. Some were built in the craneway 4 building. Others, the largest ones, were built on the blacktop area adjacent to the launching ways. The ones built inside the building had to be moved out to the ways within reach of the 200-ton whirly crane. Pipe rollers were used to move the modules out from the building. This was a slow process. It usually took about two days to move a module the 100 yards or so. But it was a safe method and quite inexpensive. Not more than three men were involved.

The modules had to be turned right side up before they could be set on the ways. This was a difficult and very dangerous task. We had no experience at it, and ours was the only shipyard in the country, perhaps the whole world, that had but one whirly crane with which to work; therefore, there was no source of experience from which to draw. We had to learn the hard way. During construction of the first hull, horrible mistakes were made. The first large module turned over was a near disaster. The problem was that when the whirly crane lifted the module to turn it, there was a point or instant when it reached the top of the turn that slack in the cables developed and the module would start down faster than the crane could take up the slack. This caused an impact or jerk, the danger being in collapsing the boom on the crane or jerking the crane off the track. Material handling people knew in advance the slack would develop at the top of the turn. So on the first module they attempted to use a 40-ton mobile crane to catch the module during that instant so the whirly crane would have time in which to take up the slack. The plan didn't work. The boom of the 40-ton crane collapsed, the operator barely escaped being killed, and the 200-ton crane was nearly jerked off its track. The Material Handling Manager was in the cab of the whirly crane during the effort. It scares him to remember the episode.

The above operation took place on a Saturday. The Division President had invited some friends down to witness the job. One of them was the president of Precision Cast Parts. After the disaster, the Division President left with his head hung down. He must have been terribly embarrassed and ashamed of his people. But a lot of good came from the experience because material handling people learned a lot from it.

After that unfortunate experience, the Material Handling Manager went to the lofting department and had a scale model made of the next module to be turned. The scale model was made of heavy cardboard and was exact in every detail. He then asked Marine Engineering to calculate the weight of the actual module. Then he obtained a four pound laboratory scale. Using the laboratory scale with string as cables, he could simulate lifting and turning of the module. Since he knew the weight of the module, he could determine how many tons were represented by each pound and ounce shown on the lab scale at various stages of the lift and turn. He would know then, how the real module would behave when lifting eyes were placed at different locations. By placing lifting eyes in the

most ideal locations, the kick at the top of the turn was eliminated. He would then show Marine Engineering and Marine Production exactly where to position the lifting eyes. then he would meet with the rigger foreman, the riggers and the crane operator and demonstrate with the model how the module would behave. He went through this procedure on every module requiring turnover, until there was enough repetition to make it unnecessary. There were no further mishaps.

Railcar production

In February 1977, the Materials Manager/Security Director was promoted to Manager of Railcar Operations, making him responsible for all railcar production operations. Responsibility for the Materials Department and Plant Security was assigned to others.

This change in organization came at a time when the railcar market was strong and getting stronger. While his superiors gave him no direction as to what was expected of him, the new Operations Manager saw the need to:

1. Increase production quantity
2. Reduce labor hours per unit
3. Improve quality
4. Reduce the frequency of injuries

Production superintendents were unaccustomed to strict organization discipline and knew little of chain of command principles. The new manager wanted everyone in the organization to know where he or she fit-in and to whom he or she reported. Therefore, he developed organization charts showing every level of supervision down to leadmen. This gave the people a sense of pride and belonging; for it is human nature to want to know where one fits in an organization, and people like to see their names shown prominently on an official chart. The charts were kept up-to-date. Everyone with any responsibility for the work of others was identified on a chart. The people began to respond positively to the new sense of direction. Meetings were held regularly to discuss production schedules, labor hour targets, quality and safety. An overhead projector was used to show how each work station stood in terms of the schedule and the target hours. The manager would praise them for their good work and encourage them to do better. They always did.

A record number of cars, 3,127, were produced in 1977. Then in 1978, a second production line was put into operation and 5,004 railcars were produced on the two lines, far in excess of the number ever produced before. That number, however, was eclipsed in 1979 when 6,079 cars were produced. (See Footnote 1) The plant was doing great. Quantity of output was improving, quality was improving and labor hours per unit were better. A weakening market prevented the plant from surpassing the 1979 record.

Accident prevention

Of all the problems facing the new rail operations manager in 1977, getting the workers to do their jobs safely was perhaps the toughest. Accident costs were enormous. Workers compensation cost was hundreds of thousands of dollars annually. These costs took a huge bite out of company profits. There was a "production at any cost" attitude prevailing from the lowest worker all the way up the organization to superintendents, even higher. They wanted quality more than anything else.

The Operations Manager had a great deal of experience with accidental injuries. During the early 70's, there were six (6) fatalities in the plant, three of which were in the Material Handling Department. All three were young men, good young men, who died needlessly because of their own carelessness and unsafe acts. During those years a variety

of gimmicks, incentives and crash programs sponsored by the Safety Department were instituted to promote safety. None of these programs had any positive results. Safety Department personnel were ineffective. Not because they were incapable or did not try. They were lacking one key ingredient: they had no jurisdiction over the workers; consequently, their efforts were largely ignored.

The Material Handling Manager was severely troubled by the deaths of the three young men, under his jurisdiction, who died in separate incidents. He made a vow to himself that it would never happen again. He had learned that gimmicks, incentives and crash programs did not alter workers' unsafe practices. Nor would such programs have any effect on the "production at any cost" attitudes that permeated the entire plant. He began to get tough on supervisors under his jurisdiction, and to measure their performance in accident prevention. This method began to pay off. Material Handling soon had the best safety record in the plant, even though many of its people were engaged in the most hazardous work. Then Dupont Consultants were employed to make a plantwide study of safety problems and to make recommendations. The Material Handling Manager learned from Dupont representatives what he had been learning the hard way; that is, the only effective way to prevent unsafe practices is to hold supervisors at every level accountable for the safety of workers under his/her jurisdiction. The average worker will not automatically go about his tasks in the safe way. He must be required to do it, the same as he/she is required to show up on time, to produce the required quantity, and to do quality work.

When the Material Handling Manager was promoted to Rail Operations Manager, he was ready. The first day on the job he called a meeting of all superintendents, general foremen and foremen. In this meeting he made clear what was expected of each of them in terms of quantity of production, quality, cost and safety. He placed responsibility for accident prevention squarely on the shoulders of the individual supervisors. Then to show he meant business, he required every accident report to go to him for review before it went to the safety department. He had a chart on a peg board which had the name of every foreman, general foreman and superintendent. When an accident report came in he marked an "X" opposite the name of the responsible foreman, then the responsible general foreman and the responsible superintendent.

At the end of each month he met with all the supervisors and reviewed the record for the month. Some crews would go the entire month without a single injury. An overhead projector was used to show the chart to everyone at the meeting. Foremen of crews that had no injuries were proud. Those that had several injuries were not so proud. They were encouraged to try harder.

Other measures too lengthy to mention here were put into practice. But in addition to holding supervisors accountable, they had to be taught, and their attitudes had to be changed. They had to be convinced that it was within their power to prevent injury to workers under their respective jurisdictions.

A pamphlet came across the manager's desk from the American Society of Safety Engineers. It contained some wonderful language and philosophy about the strength of attitudes in accident prevention. One particular paragraph is quoted below:

> "We believe, that accidents are conceived
> by improper attitudes and born in moments
> of action without thought. They will
> cease to be, only when the proper attitude
> is strong enough to precede the act–when

the right attitude creates the awareness
that controls the act."

The manager used this quotation over and over in his meetings with supervisors. Eventually, they began to believe it. Some of them can probably hear the above words ringing in their ears to this day.

The manager also stressed the enforcement and practice of seven keys to good safety supervision which are:

1. Set a good example
2. Know the operation
3. Be alert for unsafe conditions
4. Inspect often, inspect intelligently
5. Take effective corrective action
6. Maintain discipline
7. Know your employees

About 1980 the manager began to invite foremen with outstanding records in accident prevention, one each month, to speak to the entire group at monthly meetings. One Plate Shop Foreman, Steve Davis, who had an outstanding record, said in his speech, "The difference between those who get hurt and those who don't is in their attitudes."

The program was solid and the people knew it was there to stay. They knew that the company was not just giving lip service to their safety. Supervisors were proving beyond doubt, that they could produce quality cars in record numbers and do it safely. They began to carry the banner. Results were dramatic.

They started out 1977 with the worst safety record in the rail manufacturing industry. The incident rate stood at the deplorable level of 56. That is 56 reportable injuries for each 200,000 labor hours. By the end of 1978 it was down to 39. For the year 1979, the manager set an objective of 20. All the supervisors agreed to it. They believed it would be met. The manager's superiors however, were reluctant to accept it. They didn't believe it to be achievable, but the manager stuck with it. The operation finished the year with a 19.8 incident rate and built 6,027 cars. Improvement continued at an impressive rate and rail operations soon had the best safety record in the railcar manufacturing industry.

The railcar market declined dramatically and the Rail Operations Manager retired at the end of 1983. Even though the number of workers had been drastically reduced by 1983, strong emphasis to safety was shown. At the end of that year Safety Manager Steve Austin reported:

"The rail department worked 300,152 hours
27 months, with zero recordable injuries.
That's the best safety record among the
U. S. carbuilders."

In accident prevention, you can't beat a zero.

Author note

Virgil Hatfield retired January 13, 1984. He was born in Oglesby, Texas in 1924. He joined FMC in 1966 after a 20 year career with Southern Pacific Railroad.

According to the January/May, 1984 *Torch & Stinger*, Ed Brumley, Rail Production Manager, and Master of Ceremonies said of Virgil, "He always wanted to clean up something...we had some beautiful antique jigs and fixtures from WWII and before. He scrapped them all. We had lifeboat oars...he gave them to the Sea Scouts. Another problem was with Big Joe Huserik, who saved every piece of scrap wood. I never found out who won that battle. After Virgil became Rail Operations Manager, two new words entered his vocabulary, 'save and keep'. I can truly say Virgil is one of the best managers I have worked with and for." Division Manager John Carroll summed up the scale of operations under Hatfield, "From February 1977 through December 1983, Virgil Hatfield managed the manufacture and delivery of 20,752 FMC railcars. This represents 620,000 tons of fabricated steel products. I defy you to name another man or men in the entire Pacific Northwest who can claim to have managed production of that much in the last six years! During the time of all of this output, investments were being made to expand and improve our facilities. About $20 million was invested in our railcar facilities during Virgil's six years as railcar operations manager and every cent has been returned to FMC Corporation in hard cash." The safety record given in the account by Virgil was reiterated by Carroll who said, "Virgil was particularly interested in his people, as evidenced by how he made them work safer."

Hatfield and his wife, Delores, live in Oak Hills, near Cedar Mill, Oregon. They both love the game of golf. When they travel, they play nearly every golf course they see that looks good to them.

Footnote

(1) The official number of cars produced per Lois Emery's list showed 6,027. Virgil's greater number of 6,079 was probably correct; but the extra cars may not have been picked up on the billings.

Chapter 19

GTT Fiasco

During the 1970's, MRED produced 17 barges of various sizes and kinds worth about $43 million, and "chewed up" about 45,000 tons of steel in the process. It produced five Gas Turbine Oil Tankers (GTT) for Chevron Shipping Company which sold for over $140 million. The tanker job consumed over 55,000 tons of steel and machinery. Even so, the tanker program's problems nullified any profits made on the barges. The story of those problems unfolds later in this chapter.

Seventies began strong but faltered in a year

1970 began the decade quite well, in that 8 of the 17 barges in ten years were produced that first year. But the barge business fell flat in 1971, as only 3 were built. That year, part of the drought was made up with ten barge conversions and/or repairs, two tugboat conversions, and a tug re-powering. The year yielded about $4.3 million compared to almost twice that in 1970.

A precipitous drop occurred in 1972. The major marine work consisted of a 56-foot mid-body section and a solarium for the State of Alaska's ferry MALISPINA, sold to Willamette Iron & Steel Corp. of Portland, three barge conversion-repairs and twelve hatch covers to Todd Shipbuilding. The value was slightly over $700,000.

Tankers occupy four years of decade

Barge building came to an abrupt end in 1973, probably in preparation for the Chevron Tanker program. Only one barge was built, the $845,000 KLINKWAN for the Halvorson Co., 276' long with a 70' beam and 16' 8" depth. She was launched on February 2, 1973.

Immediately after the launch of KLINKWAN, the keel was laid for the CHEVRON OREGON. Otherwise the shipyard was occupied totally with the Chevron Tankers from February 2, 1973 until February 5, 1977. The last of five tankers was launched that month.

Railcar business good

On the other hand, the railcar business was very good. The company built 33,561 railcars in the 70's, more than three times the 10,927 units built in the previous decade. If the cars had all been 52'6" in length, as most of them were, some were longer and a few shorter, that total would have made a train 333 miles long.

Gunderson loses its name

On May 1, 1973 Gunderson Inc. was elevated to divisional status in the FMC Corporation and became the Marine and Rail Equipment Division (MRED.) This was painful news for the older hands who had helped Gunderson grow through the years. They thought there had been enough name changes. The name Gunderson Inc., was nationally known. The quality of its workmanship and reliable delivery of its products had won national respect for the Gunderson name in the rail and marine industry. They feared the loss of the name might cause identity problems. But their fears were soon partially offset by virtue of FMC's own fine reputation and vast financial resources. Moreover, FMC's world-wide advertising budgets would include Gunderson, albeit with a different name. Anyhow, not many old customers and friends paid much attention to the

new name unless in formal communication. They still referred to the company as "Gunderson". At that time MRED had 1100 employees with a projected increase to 1400 in mid-1973. Actually, employment soared to about 2,000 in October 1973 and fluctuated around that number between 1974 through 1977 and returned to 1,150 in 1978.

FMC's new, bright red trademark became effective May 1, 1973. It was designed to more readily identify FMC with the markets it served.

The Black Mesa & Lake Powell

Marine & Rail Division made more box cars than any other kind of cars, but in 1973 a most unusual railcar job was performed. It was for 83 cars, 122-ton capacity, 61'9" long, air operated, bottom dump, for Black Mesa and Lake Powell Railroad. They were used for a 78-mile coal haul from a Peabody mine in Kayenta, Arizona, to the Navajo Power project generating station near Page, Arizona. The entire project was owned by the Navajo Indian tribe.

The railroad had no connections to other railroads so the logistics of delivery were quite complicated. The cars were shipped by rail to Flagstaff, Arizona, then by truck to the job site. The trailer, specially built to load and unload the coal cars was a "tilt bed design". Robert (Bob) Murphy, purchasing expediter and traffic coordinator, did a remarkable job arranging the transportation of these cars to the remote location.

The cars were equipped with four longitudinal bottom dump "clam shell" doors fabricated from aluminum extrusions. Each door was 46" wide by 19' long. Each door was actuated open by an air cylinder supplied by a special pipe line from the locomotive's air compressor. The cylinder was controlled by an on-board, electrical solenoid attached to a shoe on the outside of the car. When the shoe passed over an electrical pad alongside the track, the door opening operation was triggered. The 122-ton load was dumped in less than 20 seconds. Loading of the train was done in 90 minutes at the mine without stopping the train. The cars were painted black with four diagonal, yellow stripes on each side and end so that they would be distinct and serve as a cautionary signal for oncoming automobiles or animals. The train and mine were operated totally by the Navajo Indian Tribe.

Prophetic advice

As if to predict the severe gasoline shortages forthcoming soon, the May, 1973 issue of the *Torch & Stinger* contained a discussion of the effects of pollution caused by excess travel. It suggested that carpooling would be a way to cut gasoline consumption, and pollution too.

In June 1973, Bruce Harmon became Public Relations Director and Editor of the *Torch & Stinger* replacing Jim Race, who had done a fine job of reporting company activities since December, 1971. Prior to Race's term as editor, Harold Vick held the post of editor for the *Torch & Stinger*, in December, 1967, until November 1971. His heavy responsibility as Director of Safety made it necessary for Race to replace him.

The "prophecy" just mentioned began to materialize in October 1973. As a result of OPEC's (Organization for Petroleum Exporting States) reduction of production quotas and subsequent price increases, there was a shortage of gasoline and other petroleum products. Abnormally high demand for petroleum products in short supply caused prices to soar in an inflationary spiral. It affected nearly every commodity used in manufacturing.

Runaway inflation, shortages and long lines

The consumer was shocked with high price tags. Lines of automobiles formed at service stations hoping to get a tankful of gas. Many got only ten gallons and some, if not good customers, were turned down entirely. The stations closed early, when supplies ran out, and many closed permanently because the supply was so restricted or was cut off from them entirely. Slogans such as "Pool It" and appeals to "Double up" appeared. Special freeway lanes were created and were reserved only for buses and cars containing three or more passengers. There was talk of a work week consisting of four ten-hour days. The newspapers gave all kinds of tips on how to conserve energy.

There was one shortage during World War II which I thought I would never see again, but here it was again – a shortage of paint strainers. The January, 1974 *Torch & Stinger* published an ad, Panty Hose Wanted! It pleaded, "Panty hose! With all the other shortages these days, we are gripped with one more...panty hose. The painters have found them to be the best quality paint strainers available. With all production at peak capacity, and painting on the tanker increasing as the ship nears completion, panty hose are desperately needed to strain the hundreds of gallons of paint used. Ladies, this is a plea to you. Please send all your worn-out panty hose to work with your husbands. The hose can be turned into the tool room, Rich Gonzales, or Bruce Harmon, Ext. 203. Support FMC's Panty Hose Drive - today. Thanks."

The Union Pacific Company actuated their Portland car shop in the Albina yard and were stretching out 500 hopper cars from 42'6" to 52'6" long by cutting them in two and inserting a section in the middle. They bought new, stronger ends for these cars from MRED who were making the same ends for hopper cars for Burlington Northern at that time.

25,000th car built

On August 11, 1975, the 25,000th railcar rolled out the door of MRED's car shop. It was a 100-ton capacity, double-end door, woodchip car, part of an order for 200 from Burlington Northern Railroad. To commemorate the event, Charles H. Johnson, Division President and Manager, presented Harry Surles, Burlington Northern's regional Vice President, a scale model BN box car.

Philip Lively, Plant Manager, in the late seventies, calculated that larger quantities of cars could be produced in the facility and proceeded to prove it with the aid of strong leaders who knew how to build cars after the trying times of the first "UP" order. Lively presented a challenge to all MRED managers that, out of pride, they fully endorsed.

Records achieved

Railcar production in 1978 was 5,004 units, almost 2,000 units more than in any previous year. But in 1979, records were broken again when 6,027 freight cars were built. Box cars outnumbered the other types. Covered hopper cars came in second, wood chip cars third, and ore concentrate dump cars a distant fourth. During those escalating production years, many refinements were made in the car construction line. This enabled MRED to become one of the largest, most efficient carbuilders in America.

The 70's saw Gunderson emerge as one of the largest steel consumers in the country. It used 750,000 tons, almost triple from the 256,000 tons digested in the 60's.

MRED largest barge builder in west

By 1972, MRED was "scrounging" for work for their vacant ship ways, even though they had become the largest barge builder on the Pacific Coast. Their four ways enabled

MRED to handle repairs and build the best and biggest barges. Their side-launch Ways #4 was 600' in length and they had considered extending them to 650 feet to handle the biggest barges in the world (they later did). Their facilities for fabricating, lifting and moving larger hull modules evolved. Sometimes, they built two barges on Ways #4 at the same time.

Another big increase in capacity occurred in 1973 when MRED bought a giant $1.1 million Clyde, gantry mounted whirley crane. The crane's lift capacity was 200 tons. Later, it was expanded to 250 tons. This capacity made the Clyde the largest shipyard crane on the Pacific Coast. It enabled Gunderson to build much larger ship sections on shore and under cover, eliminating thousands of man hours of work on the outside ways.

Trio sets sights on big tanker barges

C. Bruce Ward, President, W. R. (Bill) Galbraith, Vice President of Sales, and John Hohler, Chief Marine Engineer, pondered going into the shipbuilding business in a big way.

Hohler had a system for figuring the cost of a barge down to "an ant's eyebrow". He had a mannerism with which he mocked his estimating ability–he wet his thumb with his tongue and held it up into the wind, then smiled that infectious smile of his. He knew precisely what construction was needed and materially aided Galbraith in compiling his successful bids for profitable jobs. Then Ward stroked his final numbers on the bids. The trio was a winning combination throughout those barge building years.

They began talking with Jim Rettig, of Crowley Maritime Corporation, about a 600-foot tanker-barge with a spoon bow. It would be a barge with a notch in the stern end, making it possible to push the barge with a tugboat. Although Crowley didn't get around to placing an order, Chevron Shipping Company became interested but wanted to make the barge self-propelled. They had a number of concepts about such a vessel so they got together with the three Gunderson representatives and began negotiating to bring the concept to fruition.

Six tankers booked

Soon, the company was asked to bid on three 35,000-ton, 267,000 barrel capacity oil tankers for Chevron Shipping Company. MRED won the order. Each ship had a $16,000,000 price tag. They were to be 650' long, 96' in breadth and 50' in depth. Later they received an order for three more ships at the same price. The contract included an escalation clause, but it was pitifully small. At the time of the bid, OPEC hadn't made its move. Business was at a low ebb. Prices were very competitive.

Aiding Hohler in compiling his estimate for the tanker bid was Cecil Carper, Chief Estimator, who joined the company in late 1971. He had served as an estimating supervisor for American Pipe and Construction Company for the previous 16 years. The information with which he had to work was sparse because the tankers were only a concept. And the time with which he had to assimilate it and come up with pricing was preciously sparse. Little did he realize at the time, that he later would spend the rest of his career at MRED in "Cost Recovery", a group put together to research, prepare, assemble and prosecute our arbitration case against our customer. More about that later.

Earlier, in October 1971, the marine engineering department lost the services of a fine engineer, when Karl Koernig retired after 12 years. He had the responsibility of designing and drawing the complicated piping systems for barges and ships. These complex systems involved hundreds of feet of pipe, valves and fittings which wound their way through other interfering lines, bulkheads and steel members. Karl was an engineer from

the "old school" in his native Germany. He was also an accomplished violinist and played with symphonies in Germany and the U.S.A. The tankers would require many "Koernig type" engineers, so vast were their "arteries, veins and nervous systems for circulation of air, electrical current, fluid and gases".

An interesting prelude to the tanker program was the making of models of the tankers and testing them. In a letter of January 23, 1992, John Hohler wrote, "The model tests were conducted in the Netherlands at Wageningen. The model was selected by Chevron and was observed by Phil Spaulding and myself with Chevron. On one trip, I went to Kockums shipyard in Sweden to see the best of shipbuilding in Europe at that time, according to Chevron's chief Naval Architect. Kockums is at Malmo in the south of Sweden across the straights from Copenhagen, Denmark."

The gas turbine tankers

The ship was a self-propelled design with a gas turbine engine. The engine turned an electric generator at 1,200 RPM. The generator supplied power to a 12,500 horsepower electric motor whose shaft rotated at a constant 100 RPM. The motor shaft was coupled directly to a propeller shaft, which turned a propeller whose blades could be hydraulically pitched to change speed and direction of the ship. In addition, the ship was equipped with electrically driven bow thrusters, (motor-driven propellers recessed in both sides of the ship near the bow), which helped the ship in docking or changing direction.

The controls for steering the ship, for filling and emptying the tanks, for controlling the machinery, and the ship's communication system were designed to enable a crew of 16 to operate the ship. A conventional tanker required more than 50 men to operate it.

The ships had a modular deck house with modules (rooms and quarters) that were prefabricated and completely finished, ready to install. It was considered a hotel system aboard ship with all the human comforts and amenities.

Ships were latest in state of the arts

The ships were the latest in the state of the art of shipbuilding and, by far, more complex than anything ever built by the company.

During the first several months of the program, hulls were built at the same time as the designs of the complex systems were being completed. Gunderson workers proceeded in good faith on the premise that they would be paid for all the changes that flowed from Chevron in a steady stream. Eventually more than a thousand change orders were involved.

An example of a change order, might be that the customer wanted a different, more expensive engine to drive a generator, than the one we included in our bid. This necessitated a change in the motor price, analysis of the motor's foundation, its connections to the generator, all piping connections and controls for the motor, and prices for all differences in materials. Engineering of the change and difference in labor to install, if any, were factors. These changes plus overhead and profit may have resulted in a price increase. Conversely a less expensive motor may have resulted in a lower price.

The project's changes and complexity forced the company to expand its work force far above the "500 new jobs" estimated by C. Bruce Ward, Division President, at the time he announced the order.

Opec oil shock causes inflation spiral

The severe oil shock inflation, caused material costs to soar beyond the reasonable assumptions made in compiling the original bid. This inflation also affected the

unexpected flood of "design as you go" change orders. Steel costs rose 60% in just a few months. Steel pipe, valves, flanges and fittings rose as much as 300%.

Though they had signed fixed price contracts, two small companies making the modules and deck hoists threatened bankruptcy, unless given increases to cover the inflation. Being well into the program, and there being no other viable supplier for the these two items, MRED was forced to "cave in" to their demands on the premise that Chevron would approve the increases down the line.

There were so many change orders and so much controversy with the customer that a stalemate was reached. Timely adjudication of the changes between buyer and seller failed, causing disruption, delays and pyramiding costs beyond all reason. There came a point at which the problems had to be resolved or taken to court. They were not resolved, in spite of efforts by Ward, Galbraith, Hohler and others.

Failure to resolve issues forces arbitration

A lengthy period of legal preparation, trial by arbitration and final settlement finally resulted in an award of an extra $78.5 million to the company. William R. Galbraith said he was told that this amount would have "made us whole", but we spent $15 million on the "Tanker Recovery Program", and lost money overall. Thousands of man-hours were wasted on both sides in preparation and testimony for the arbitration. Tons of paper files were generated and it finally was necessary to rent storage uptown, so large was the volume of material. A staff of negotiators, lawyers and clerks worked for months in another rented office uptown.

FMC established a tanker claim office in downtown Portland. Several attorneys, paralegals, and clerks were on hand. Harry Baum, a former purchasing executive of FMC Corporation and a tough negotiator, was the manager of the claim group. Robert Martin a, Washington, D.C. lawyer, retained by FMC, flew in occasionally to give instructions. Marc Marquardt, a lawyer from FMC's San Jose office spent a great deal of time in the Portland office.

MRED compiled twelve bound and illustrated volumes, encompassing some 2,000 pages of highly technical matter, detailing the cost increases and delays brought about by the Chevron changes.

C. Bruce Ward told me that about $15 million was spent by MRED on legal arguments during the two and one-half year process. He was on the stand six days during the arbitration. Other managers such as Charles H. Johnson, Division Manager and Philip D. Lively, Plant Manager, spent many days testifying. The proceedings were held in San Francisco, so MRED's managers including myself, appeared there several times. The book which covered my relatively small amount of testimony spanned almost 200 pages. Doyle Thomas, Purchasing Manager, Marine, in my department at the time, spent much more time testifying than I did. Bruce said MRED was mildly satisfied with the outcome, recovery of $78 million.

Ward resigns

At about the time of the stalemate, in November, 1974, company president C. Bruce Ward resigned his office and took a job as Marketing Development Director in FMC's headquarters in Chicago. He was replaced by Charles H. "Chuck" Johnson, formerly General Manager of FMC's foundry at Anniston, Alabama.

On a Saturday morning in November, 1974, Bruce telephoned me and said he wanted to talk to me about an important matter and asked me to meet him at his office. During that meeting he told me he was resigning his presidency. I was shocked at this news. I

told him I believed he was making a big mistake–that he should continue to negotiate with Chevron and that only he could do the best job of getting things back on track. For ten years, Bruce had nurtured the company from a small boat and barge-building yard to a full-fledged shipbuilding complex while expanding railcar sales and production from 1,000 annually to well over 3,000. I said that his strong leadership would be sorely missed.

From non-self propelled barges to electric driven tankers

MRED took a giant step when it departed from its concept of "building a tanker-barge with a spoon bow that could be pushed with a tugboat". While such a barge would have some machinery and piping aboard, it was relatively simple ship construction. The exquisite, almost beyond the-state-of-the-art ships that were built were infinitely more complex.

Gas turbine-electric driven tanker

A description of the ships that Chevron bought from MRED was detailed in the following article which appeared in the July, 1974 issue of *May Day Pictoral News*:

"Chevron Shipping Company, a subsidiary of Standard Oil of California, is gambling heavily on the future, mainly centered around their new tanker fleet being constructed in Portland by the FMC Corp., Rail and Marine Division (Gunderson Bros.).

"The firm wanted a carrier more flexible than a tug/barge unit yet not as complicated and, expensive to operate and maintain as a diesel-driven vessel. Their answer came with the new combined effort of Chevron-FMC gas turbine-electric driven coast wise tanker, the CHEVRON OREGON and five sister ships to follow. The CHEVRON OREGON will accomplish the following:

....Eliminate watch standing engineering personnel by incorporating a reliable and proven machinery plant.

....Eliminate operation of auxiliary generator during normal operations by using gas turbine generator to supply power for propulsion, auxiliary electrical load, cargo pumping and bow thrust unit.

....Standard diesel generator available during maintenance period of main propulsion unit and to provide vessel power at reduced speed in event of gas turbine failure.

....All propulsion machinery and auxiliary units are self- monitoring with built in fail-safe features fitted with suitable alarm devices.

....Bridge controlled variable pitch propeller with single lever.

....All machinery units are pre-tested having built-in stand-by units capable of quick changeover for shore maintenance elimination shipboard maintenance.

....Use of high quality clean fuel eliminates need for complicated fuel treatment plant.

....Installation of mechanized automatic steering and anti- collision instruments eliminates helmsman.

....Security patrol minimized by installation of fire detection system throughout unmanned vessel space.

....Mechanized mooring line handling and deck edge winch control reduces manpower for mooring.

....Separation of ballast and cargo systems eliminates need for normal tank cleaning crews and simplifies loading and discharge procedures.

....One man operated hydraulic cranes reduce crew required when handling cargo hoses.

....Deck, deck structures and piping protected with long life coatings, eliminates need for continuous deck maintenance crews.

....Reduction of manpower required for loading and discharging with centralized and mechanized cargo and ballast control system."

Coast guard needs a year aboard to evaluate standards

"Because of its revolutionary design and manning requirements, statistics are not available for the Coast Guard to set standards. For this reason, an officer will be stationed aboard the vessel for one year or until standards for the new design can be established. Original vessel proposal specified a 13-man crew which includes the steward department. This has now been expanded to 16 as follows:

"Master, Chief Engineer, one licensed engineer, chief, second and third mate, third assistant, radio officer, three able-bodied seamen/pump men, two deckmen, OS/wiper and two food handlers. The licensed engineer and two deckmen were positions added. All personnel are certified life boatmen and trained in MarAd fire fighting school.

Ship operation

"While at sea, the three-watch system will be utilized consisting of one licensed deck officer and one tankerman using the four-hour watch. The officer has full control of the ship, crew and controls. The tankerman is equipped with binoculars, is trained in elementary radar interpretation and can take a visual bearing and radar bearing and range and recognize light characteristics.

"In port, the three-watch system is maintained as at sea. The officer mans the port control center where he has control over all cargo movement and gauging and excellent visibility of entire cargo body, gangway, hoses, etc. The tankerman is free to move about the deck, confirm gauges, tend lines, gangway and hoses and maintains continuous voice contact with officer in charge.

"Mooring and docking require the highest manpower. They are the master, the three-watch officers, three tankerman and a utility man. Operation of the windlass is a one-man operation."

Advantages of gas turbine propulsion

1. Competitive capital cost
2. Physical dimensions, 30% less engine room space
3. Power plant installed top-deck allowing more cargo space
4. Suitability to automated control
5. Availability of low-cost residual fuels

One tanker canceled by Mred

Five of the six above described vessels were built by MRED but the other one was canceled unilaterally by MRED as a result of the bitter legal hassle.

Fabrication of steel for the ships began on December 26, 1972 and delivery of the 5th ship was December 22, 1977, five years later. Keel laying to delivery of ships was as follows: OREGON...35 months; WASHINGTON...26 months; COLORADO...21 months; LOUISIANA...21 months; and the ARIZONA...18 months.

Before launch of the ships, their 50 foot high sides prevented entry into the ship except up a long ramp and then by climbing through tanks and up and down ship's ladders. As the 50 foot high sides went up, there became less routes into the ship. To save many man-hours, a ten passenger, Swedish-built (Alimak) elevator was purchased. The hoist's passenger cabin was only one meter wide (a little over three feet). It had to be

narrow to fit between the ship's hull and the Clyde Whirley crane that moved up and down its crane rails alongside the ship.

Launch of the OREGON

At the launching of Chevron's first ship, OREGON, the Governor of Oregon at the time, Tom McCall, commended the MRED shipyard for its bold effort in returning shipbuilding to the Portland area for the first time since World War II.

When the tanker OREGON was launched from MRED's Ways #4, she was only partly finished. She had her gas turbine engines, her propulsion generator and motor, her auxiliary generators and her propeller shaft and propeller. Her hull piping and valves were fairly complete. She had her huge, five story deck house and 'hotel' at launch, but they were only a shell. Modules for living spaces and offices were yet to be installed in the deck house.

Outfitting the ships

Between launching and delivery, some 900 short tons of machinery, piping, finished living quarters and electronic gear were placed on board, hooked up and tested for operation prior to sea trials. Her anchor and chain alone weighed 100 tons. This post-launch activity was known as "Outfitting". The OREGON's other four sister ships were also shells and had to be outfitted.

To accomplish this task Robert "Bob" Miner was hired as Outfitting Manager, and was given 300 men and women to do the job. John Miller and Walt MacDonald each supervised the outfitting of the ship to which he was assigned. Dick Snowden, a former Chevron Marine Superintendent and a Bethlehem Shipbuilding manager before that, with 38 years of shipbuilding experience, was hired as a consultant to the tanker outfitting department.

The outfitting took place at one of the Port of Portland's docks at Swan Island, across the Willamette River from MRED's shipyard.

Several MRED departments established offices at Swan Island in the cooperative effort – Material Control, the Outfitting Department, Purchasing, and Tanker Program Control. Every day, Jon Lafore and Lee Easton controlled up to 15 truck shipments of material moving from Front Avenue to Swan Island. Oscar Hicks and his seven person crew controlled the material in storage Bay 6 on Swan Island.

Five ships were outfitted at Swan Island. Their outfitting times got shorter as experience was gained. The OREGON outfitting took 20 months; the WASHINGTON, 16 months; the COLORADO, 14 months; the LOUISIANA, 13 months; and the ARIZONA, 10 months. (At the time of launching of the OREGON, her outfitting was assumed to have required 5 to 6 months, instead it took 20 months).

The Swan Island facility was closed within a few weeks after the ARIZONA was delivered, December 22, 1977. All equipment and materials left over were moved back over to Front Avenue for disposal and/or use by the shipyard.

Lively lowers FMC flag

Charles H. "Chuck" Johnson, President and Division Manager during the tanker program, provided an insight concerning the ship canceled by MRED. It involved 7,500 tons of steel, surplus machinery and huge castings left over from the cancellation. Most of it was held for several months with hopes that it could be sold, rather than scrapped, but there was no demand for it. Subsequently, Chevron lost a 54,000 pound rudder on one of their ships and needed one, but it was too late; the surplus had been scrapped.

When the fifth and last tanker was delivered, Philip Lively, Plant Manager, lowered the FMC flag for the last time. Phil and Chuck smiled broadly, reflecting the relief they felt that the job was finished. A long, burdensome and perilous project, one that had almost caused the demise of MRED, was finished. Lively and Johnson and the rest of us had suffered its pangs every day and night for five years.

Dump Scow 3

The end had almost come for the marine division of the company. As a result of the GTT fiasco, MRED employees began hearing that FMC corporate headquarters was reluctant to permit the yard to build any more barges or ships after the completion of the tankers.

But in 1977, the yard got approval to build the first barge since 1973, a hydraulic dump scow for Smith-Rice Company of Alameda, California. It was not an easy job to start out with, after a four year layoff, but it was still profitable. SCOW 3 was delivered in May, 1977. The *Torch & Stinger* said, "The Smith-Rice barge is unique in that it is a clam shell design. Two large hydraulic cylinders open and close the barge along its longitudinal axis, (its bottom leaves), held together by giant hinges at either end. The buoyancy of the clam shell halves aids both the opening and closing motion, after the load is discharged." Literally dropped out of the bottom of the barge. She was similar to two barges built in 1968 for Umpqua River Navigation Co., Reedsport, Oregon.

In 1977, the yard also built a 56-foot long Mid-body for the lengthening of the State of Alaska Ferry boat, MATANUSKA. This was a subcontract from Willamette Iron & Steel Corp. It used about 400 tons of steel. MATANUSKA's sister ship, MALISPINA, was similarly lengthened in 1972.

Royal family of ro-ro's

The GTT fiasco dealt a blow to MRED's pride and pocketbook. But nonetheless, 1978 and 1979 were banner years that helped heal MRED's injured resources. Trailer Marine Transport Division of Crowley Launch & Tug, San Francisco, bought four triple-deck, Roll-on Roll-off (RO-RO) trailer barges. They were delivered in April, 1978, September, 1978, June, 1979 and December, 1979 respectively. The first two barges were $7,000,000 each and the last two were $8,000,000 each. Just towing them from Portland to Jacksonville, Florida cost $300,000. They were 580-feet in length, 105-feet in beam, and 57-feet in overall depth. Light displacement was 6,400 tons, loaded displacement was 17,400 tons for each ship. Their cargo was 374 truck trailers, each held in place with hitches fastened to the deck.

The barges were the maximum width that can pass through the Panama Canal. They were named, LA REINA, (which means Queen in Spanish,) EL CONQUISTADOR, (Conqueror,) LA PRINCESA, (Princess,) and EL REY, (King,) respectively. Their service was between Jacksonville, Florida and Lake Charles, Louisiana and Miami, Florida to and from Puerto-Rico, The Virgin Islands, Leeward and Windward Islands, Venezuela, and the Dominican Republic.

The name's still Gunderson

Tom Crowley, Chairman and President of the company bearing his name, speaking at the launching ceremony of LA REINA on March 23, 1978, praised his supplier, "I'm very partial to Gunderson." He referred to the company as Gunderson even though FMC owned it and had changed the name. "There is pride in their workmanship. I wish we had it in San Francisco. About 15 major jobs have been done in Portland, including the

NEPTUNE, a beautiful job and the best finished tug we ever got, and now the LA REINA, the world's largest ro-ro barge."

The decade ended on an optimistic note with a return to profitability for MRED. MRED had regained its pride, seemingly lost in the tanker problems. It had never lost its touch for quality of workmanship.

— Top Brass Of The Past —

Chapter 20

John E. Carroll, Jr.

John E. Carroll, Jr. was appointed Division President of the Marine and Rail Equipment Division of FMC Corporation (MRED) on October 15, 1977. John T. Edelman, Corporate Vice President in charge of FMC's Material Handling Group, to which MRED was assigned, made the appointment.

A former resident of St. Paul, Minnesota, Carroll moved from California to the Portland area with his wife, Jon, and two children, Jay and Leslie.

Carroll became the fifth president of the company which was founded in 1919. He followed Chester E. Gunderson, Alvin E. Gunderson, C. Bruce Ward and Charles H. Johnson. FMC acquired Gunderson in 1965.

Carroll replaced Charles H. Johnson who was transferred to FMC's Northern Ordnance Division to become its Assistant Division Manager. In 1978 Johnson was promoted to Division Manager at Northern Ordnance.

Prior to joining MRED, Carroll was the General Manager of FMC's Airline Equipment Division in San Jose, California. He was the operation's Sales Manager prior to becoming the first General Manager of the new division.

He graduated from Purdue University with a Bachelor of Science degree in Industrial Engineering in 1964, then obtained his Master of Science degree in industrial administration from Purdue in 1968 after serving as an officer in the U. S. Army.

Railcar production records achieved

Under Carroll's leadership, MRED produced a record 5,004 railcars in 1978 and 6,027 in 1979, almost double the 3,127 built in 1977. Unfortunately, due to two business recessions that occurred between January 1980 and November 1982 (according to published data), railcar customers canceled thousands of railcar orders. The inflow of new orders slowed to a halt. As far as the railroad industry was concerned, the slumps lagged on for months after their official ending. All carbuilders were in the same boat.

MRED's car production dropped to 4,801 in 1980, skidded to 1,593 in 1981 and sank to only 25 in 1982. The number of cars built rose slightly in 1983 to 304, and in 1984 to 555. For a plant having the capacity to build 6,000 cars, these were devastating numbers.

Marine jobs help sustain MRED

While the rail side of the business declined, the marine side did not fare too badly until 1985. Between 1978 and 1984, Carroll oversaw the sales and production of 29 barges of various types comprising over 75,000 tons of shipping. This included four 105-feet wide by 580-feet long triple deck, roll-on roll-off trailer barges (RO-RO's) for Trailer Marine Transportation Corporation, a division of Crowley Maritime Corporation of San Francisco. These RO-RO's were for use in the Caribbean. When they were delivered by way of the Panama Canal, they had only inches to spare as they passed through. The last barge built on MRED's ways was the PEPEEKO, a 273-foot oil tank barge for Sause Bros. Ocean Towing Company of Oregon. She was delivered November 20, 1984, and was one of only three barges built that year. The recession had hit the marine business too.

During Carroll's term as manager of MRED, several plant improvement projects were completed. One was the acquisition of the 23-acre property, bordering MRED's 75-acre plant, from American Ship Dismantlers, a division of Schnitzer Investment Corp. The scrap yard property contained several buildings, rail spurs and a dock. It increased MRED's car production capability by 35%, according to the announcement in the *Torch & Stinger* of August, 1979.

Medical facility added

Another, and perhaps the most important improvement made, was the addition of a medical facility in mid-1979. Located in the 4350 N. W. Front Avenue office building, the center was staffed with a full time emergency physician, nurses and an X-ray technician. Its purpose was to handle job-related injuries and illnesses and return-to-work programs. MRED employees were assured of receiving top quality medical care.

Other notable improvements were made to the railcar production facilities including upgrading of the car side and underframe shops and a new state-of-the-art freight car wheel boring line. The new computerized wheel machining system, installed in 1984, replaced boring mills that were already ancient when bought by Gunderson when they began building railcars in the early 1960's.

In 1984, rumors began to surface that FMC was about to sell MRED. Optimistic business forecasts for railcar building simply did not materialize. Carroll was faced with the unpleasant task of trimming staff and expenses while maintaining morale among the remaining employees.

MRED sold – Carroll later becomes a competitor

Carroll was MRED's Division President 7-1/2 years until February 28, 1985, when the company was sold to a group of investors consisting of C. Bruce Ward, William A. Furman and Alan James.

When the divestiture of MRED was concluded, Carroll was the only former employee retained by FMC Corporation. He relocated to Chicago and became FMC's Director, International Business, then Director, Planning, responsible for all of FMC's strategic and business planning.

During the same period, Carroll was FMC's chief negotiator with the government of the Republic of Turkey on a multi-billion dollar contract to build FMC armored vehicles in Turkey under license to a Turkish joint-venture partially owned by FMC. The armored vehicle contract was signed in 1989, and the joint venture is presently producing armored vehicles in Ankara, Turkey.

Carroll then left FMC in 1989, and became President of Transcisco Rail Services Company in San Francisco California.

He is now President of Thrall Car Manufacturing Company, headquartered in Chicago Heights, Illinois. He and his wife, Jon, live in Hinsdale, Illinois.

In addition to his heavy involvement in advancing the industries he represented, Carroll was a civic and community leader. He served on the boards of directors of the United Way and the Portland Chamber of Commerce. He was the State Chairman of Oregon National Transportation Week. The purpose of this event was to acquaint the public with the importance of transportation and its impact on our society.

In May 1980, Carroll was named "Industrialist of the Year" by the Northwest Industrial Neighborhood Association in Portland, Oregon. Among the dignitaries present was Oregon's Governor Victor Atiyeh, the keynote speaker.

In April 22, 1983, he returned to Purdue University to receive a Distinguished Alumnus award. Each year the faculties of the engineering schools at Purdue present the award to a Purdue alumni, in recognition of outstanding achievement in professional and related fields of endeavor. The April-May 1983 *Torch & Stinger* covered the event and described Carroll's award: "(Carroll) is named for his accomplishments as an outstanding engineer, manager and corporate executive in the transportation industry. After graduating with a Bachelor of Science degree from Purdue in 1964, he earned the Army Commendation Medal for service as a transportation officer and company commander. He returned to Purdue for a Master's degree in industrial administration and joined FMC Corporation in 1968....." The citation continued: "The Schools of Engineering are proud to present the 1983 Distinguished Engineering Alumnus Award to John E. Carroll, Jr."

Robert E. "Bob" Gunderson

Robert Ellsworth Gunderson was born on October 1, 1931 in Portland. He was the son of Alvin E. and Helen P. Gunderson.

I remember "Bobby" as a young boy, not yet in his teens. He brought his BB gun to the Linnton plant on Saturdays when no one was working and shot pigeons that were roosting in the rafters of the plant. Afterward he came into the office and visited for awhile with me. He was quite an intelligent talker, even at that early age.

Mrs. Saundra N. Gunderson, wife of Robert E Gunderson provided the following life story of Bob:

Worked summers while in elementary school

"Bob said that he first started working at Gunderson Bros. the summer he graduated from elementary school, 1945, as an office boy and janitor. As far as I know, he worked part-time every summer thereafter until he graduated from high school in 1949. During that summer before college, he worked full time at the plant and began working out on some small construction jobs. I recall one in particular, a water storage tower erected on Healy Heights.

"He continued this kind of work each summer during college and after we were married in June, 1952, began working at the GM Distributorship at 14th & Everett.

Career oriented to sales and management

"He was drafted in November of 1952, spent a year at Camp Roberts, California, and went overseas for a year. He was stationed in Tokyo and was attached to United Nations Headquarters, Far East Command.

"When he returned in October 1954, he continued working at the GM Distributorship through the summer of 1956 and then went to work at the main plant. From that time on you probably remember more about his career history than I."

Robert's apprenticeship to his father, Al, was oriented to sales. In the 1960s he was in charge of the equipment division which handled the sales and distribution of General Motors diesel engines. Under his direction the division sold the diesel engines for powering of trucks, boats and industrial equipment. Many gasoline engines were replaced by the more efficient diesels.

Perishes in plane accident

When the airplane they were in plunged into San Francisco bay, January 19, 1967, Robert was the only passenger other than his good friend, Thomas K. Sammons. Sammons was owner and pilot of the brand new plane. Both perished in the accident.

At the time of the accident, Robert was Vice President and General Manager of Gunderson Bros. Engineering Corp., then a subsidiary of FMC Corp., San Jose, California. The plane was destined for San Jose, California where Robert was to consult with officers of the company. After the meeting in San Jose the two friends had planned to fly to Pebble Beach to play some golf and attend the Bing Crosby Golf Tournament. Robert was 35 when he died.

Stanford graduate and community servant

Robert attended Grant High School of Portland, Menlo Junior College and graduated from Stanford University.

He was appointed to the Oregon Port Authorities Commission by Governor Mark Hatfield in 1966. He also served on the board of trustees of Lewis and Clark College, the board of directors of the American Railway Progress Institute and the Delta Park Commission.

He was a member of the Trinity Episcopal Church, the Arlington Club, Waverly Country Club, Masons, Shriners, Pacific Railway Club, and was active in the Oregon Republican Party and the Oregon Heart Association. He was one of the 20 original members of Golf Enterprises (Trembling 20), a golfing group which sponsored local golf tournaments such as the Portland Open.

He was survived by his wife, the former Saundra Newcastle, four children, Marquam, Cornelia, Brent and Helena, and his parents.

Charles H. Hawkins

The October 1974 issue of *Torch & Stinger* carried Charles' retirement and it is quoted as follows:

"Charles H. Hawkins, a prominent executive at this plant since January 23, 1955, began a medical disability retirement September 1, 1974. Mr. Hawkins joined the division (then Gunderson Bros. Engineering Corp.) as Assistant Controller. He succeeded Ray Spear a year and a half later as Controller. He served as a member of the Gunderson Bros. Engineering Corp. Board of Directors and Assistant Secretary of the company until 1965, when he became Vice President-Finance.

"During his tenure with the company, Mr. Hawkins led an active business life. He was President of Downtown Parking, Inc. and on the Board of Directors from 1958 to 1973; he is currently Vice President and Secretary of Gunderson Bros. Investment, Inc., the Gunderson Brothers' original company, founded in 1919. (As Wire Wheel Service, Inc.) From 1965 to 1973, he also was Secretary-Treasurer of the Eugene Hotel, Eugene, Oregon.

"Professional organizations in which Mr. Hawkins has been active include the National Association of Accountants, International Vice President; Financial Executives Institute, where he served as President of the local chapter; he has been active with the United Good Neighbors over the years; he is currently serving his third term as President of the United Metal Trades Association; he is on the Executive Board of the Pacific Coast

Shipbuilders' Association and Chairman of the Language Committee; he has also been Chairman of the Employers' Group at the Port of Portland.

"Mr. Hawkins, or 'Charlie', as everyone knows him reminisced about this years at Gunderson, and now FMC:

'When I came to work here in 1955, Gunderson had 85 employees. I've watched it grow from 85 to well over 1800 over those years and have seen millions of dollars of plant expansion take place.

'Let's not kid ourselves, though we have seen tremendous growth over the last two decades, there have been many times when we were financially lean. We were always able to overcome it, though, through the combined efforts of all employees.'

"After retirement, Charlie will still be winding up his current activities. He plans to 'take it easy and hope to regain my health'.

"Mr. Hawkins closed his comments by adding, 'Those twenty years on Front Avenue have been a wonderful experience. I have enjoyed many interesting changes that occurred as the company grew.'

"The Marine and Rail Equipment Division bids farewell to an outstanding executive, devoted leader and great friend of 'the family' that was once Gunderson Bros. Engineering Corp., and an important part of the heritage of this FMC Division. Best of luck to you always, Charlie!"

Charlie had a good tutor in Raymond Spear who was Controller when Charlie first arrived at Gunderson's.

Charlie's brilliance in managing company finances was a precious asset to the company. He introduced several lucrative innovations which improved cash flow and reduced interest expenses.

Charlie underwent two heart by-pass surgeries during his latter years. They occurred at a time when the operation was new. He suffered several complications.

He passed away July 9, 1977 after only three years of retirement.

Two of his children were Gunderson employees. Kenneth, an accountant who was employed during the 1960's. Darlene L. Hawkins, formerly Olstad, worked in Gunderson's Finance Department as Accounts Receivable Clerk. She presently works in Gunderson's Quality Control Department.

Charles H. "Chuck" Johnson

Charles H. "Chuck" Johnson was appointed President and Division Manager of FMC Corporation's Marine and Rail Equipment Division (MRED) on November 13, 1974. He became the fourth chief executive of the company since its founding in 1919. He followed Chester E. Gunderson, Alvin E. Gunderson and C. Bruce Ward.

Ward, after ten years with Gunderson and MRED, resigned the presidency of the division and was transferred to the job of Marketing Development Director at FMC's Machinery Group in Chicago.

Johnson, at the time, was a twenty-five year veteran with FMC. His responsibility prior to joining MRED was Western Operation Manager of FMC's Pump Division, Montebello, California.

After joining FMC, he served for sixteen years in various engineering activities at FMC's San Jose, California Ordnance Plant. In 1966, he became acting Manager. In 1968, he was appointed assistant manager of the Ordnance Engineering Division, San Jose California. In 1970, he was named to manage FMC's Steel Products Division, at

Anniston, Alabama and held that post until 1973 when he was given the position at the Pump Division.

He received his Bachelor of Mechanical Engineering degree at the University of Santa Clara, in California.

Perilous period for MRED

Johnson presided over MRED during one of its most perilous periods. He came aboard during the building of five Chevron Gas Turbine Tankers. The tanker program was beset with cost overruns and delays due to hundreds of design changes that Chevron Shipping Co. ordered and refused to negotiate. The job quickly went into the red. MRED had no choice other than arbritation.

It became necessary to set up a separate legal staff with its own office in downtown Portland to pursue, investigate, record and execute action to recover the costs associated with the design changes. There were about 25 employed, including an office manager, four or five lawyers, a few paralegal aides and clerical people working under the direction of Robert Martin, a Washington D.C. attorney. A corporate attorney, Robert Marquardt, headquartered in San Jose, spent a great deal of time in Portland counseling the downtown staff and MRED employees. Harry Baum managed the legal office. Thousands of documents were generated and, even after the suit was settled, had to be held in storage for several years.

Johnson said that Jack Edelman, an FMC Corporate Vice President in charge of MRED, spent most of his time on the Chevron problem.

In addition to running MRED's carbuilding business and the distressed shipyard, Johnson was immersed in this legal morass. It consumed hundreds of hours of his valuable time.

When the arbitration procedures were concluded and Chevron and MRED came to a settlement, Johnson said Chevron was vindictive toward MRED. One of the six ships on the order from Chevron had been unilaterally canceled by MRED and most of its steel and castings were on hand. MRED offered to sell Chevron a 54,000 pound rudder and other surplus from the canceled ship but they refused to buy it so it was scrapped. Subsequently, Chevron lost a rudder on one of their ships and needed one but it was too late, the surplus one had been scrapped out.

Johnson said his main concern was maintaining his calm for the three years of his presidency at MRED.

His most fulfilling moment was when he signed over the fifth and last tanker to Chevron Shipping Co.'s Captain John Ehrensvard and Chief Inspector Bob Matson on December 22, 1977.

Despite the enormously successful railcar operation under Johnson's guidance, he said, "Due to the problems of the Chevron program, we were losing money as fast as we could make it, but we still tried to treat our people with the respect and praise to which they were entitled." He said, "It would have been easy for me to say, 'No', to the balloons and hot dogs and the fabulous launching ceremonies for each of the five Chevron Tankers, but every MRED employee felt good about their achievement of producing such wonderful ships."

While at MRED, Johnson compared his various jobs with FMC. He said, while he was at the Ordnance plants, the decisions were made on a military basis. While at MRED and at Anniston, the decisions were commercial, he made them and he was comfortable in making them.

Johnson moves up ladder

In November, 1977 Johnson was promoted to Assistant Division Manager of FMC's Northern Ordnance Division in Minneapolis, Minnesota. This division produced naval gun mounts and guided missile launching systems for the United States and allied nations.

During Johnson's term as MRED's Division President, over 9,000 railcars were shipped, a second railcar production line was installed, and all of the five tankers were delivered. Under his leadership many production and safety advancements were accomplished.

On leaving the MRED to become Assistant Manager of FMC's Northern Ordnance Division in Minneapolis, Minnesota, he wrote a letter to MRED employees, parts of which are directly quoted:

"I am taking this opportunity to thank each of you for the magnificent effort displayed on behalf of the Marine and Rail Equipment Division. We have had some trying times, but, through your efforts, the future looks bright, with great potential for growth.

"I leave Marine and Rail with mixed feelings. I will miss the great people and friends I have come to know. I will miss the great Northwest with all its beauty; however, I look forward to hopefully finding in my new assignment the kind of people I have found here, and rewarding experiences equal to those gained at Marine and Rail."

A fine tribute to fine people from a fine gentleman.

He was succeeded by John A. Carroll, Jr.

In 1978 he became Division Manager of the Northern Ordnance Division at Minneapolis. Then in 1981 he was named Corporate Vice President and General Manager of FMC's Defense Equipment Group, San Jose, California.

Johnson retired from the Defense Equipment Group October 1, 1983. On his retirement, FMC Corp. retained him as a consultant for 1-1/2 years.

Johnson and his wife, Claire Ann have homes in Lake Oswego, Oregon and Saratoga, California. They divide their time equally between the two homes. They were both natives of California. They have three sons, Robert, Jeffrey and Timothy.

Philip D. Lively, MRED Plant Manager

Philip D. "Phil" Lively joined Marine and Rail Equipment Division (MRED) as Plant Manager in February, 1974. In this capacity, he was responsible for all production and plant management at the 75-acre railcar and shipbuilding plant.

According to the *Torch & Stinger*, March 1974 issue, a brief summary of Lively's experience prior to joining MRED follows:

"Since his graduation from Stanford in 1951, Philip Lively was associated with FMC's San Jose Ordnance Plant. He served as Supervisor of Standards and Engineering, Chief Manufacturing Engineer, and most recently as Works Manager. He has a B. S. Degree in Industrial Engineering and a Master's in Business Administration.

"Although he has spent his career in California, Lively is not unfamiliar with the Northwest (Oregon). His father is a native Portlander, and his mother's family reside in the Salem area. Lively himself was born in Medford. He and his wife, Joyce, have three children, ages 20, 19 and 17.

"Mr. Lively is a registered professional engineer and is affiliated with the American Arbitration Association, the American Defense Preparedness Association, Association of

the U. S. Army, Boy Scouts of America, and the Commonwealth Club of California. He was chairman of the Planning Commission for the City of Saratoga, California."

Railcar shop achieves records

During Phil's tenure as plant manager of MRED, and after implementing several improvements to its car building facilities, the company achieved record production of railcars in 1978, and exceeded that record again in 1979. He said, "The expansion program was undertaken to provide the plant facilities, equipment and grounds so that the Portland car builders (MRED) could be the best in the U. S. The original estimate for the long term was $15 million but the total was never spent. Judging from Gunderson's current position in the railcar market, Phil's stated goal has now been reached.

Railcar production escalated from 2,492 in 1974 to over 3,000 for the years 1975, 1976 and 1977, although this capacity had been shown back in 1972 and 1973 when, likewise, slightly over 3,000 cars had been built. But Phil engineered the dramatic jump in 1978 when 5,004 cars were produced, and again in 1979 when 6,027 were sold.

1980 was to have been a year of 6,500 or more cars. Indeed, the orders were on hand, but the bottom fell out of the railcar market and in 1980, production dropped to 4,801, then, in 1981 it fell to 1,593 and hit bottom in 1982 at only 25 cars! MRED had to accept cancellations of thousands of so-called firm orders for railcars.

Lively had overseen the plant's being set up to run standard cars at a rate of 40 per day maximum. "This assumed longer runs of 'Vanilla' type cars," recalled Phil, "We really only hit 30/day and had not spent but about $2-3 million on line additions, side lines and increased paint and stencil capability. "

Lively's biggest challenge

During his years at MRED, Phil's biggest headache was the Chevron Tanker program which took place between 1972 and December 1977. Fraught with cost overruns due to Chevron's refusal to adjudicate change orders and a resulting legal battle, MRED endured great peril to its reputation as a first class shipyard. Thanks to an excellent legal staff, impeccable records, and powerful testimony by MRED personnel, a substantial settlement was obtained enabling MRED to come out fairly whole.

As Lively relates it, "A most unusual para-legal, legal and claims exploration group was assembled to challenge the Chevron position that all of the problems were of FMC's making. After almost three intense years of preparation, investigation and finally arbitration hearings, both parties came away wounded, battered but with 'House Flags' still flying. The program was a financial loss, but a recovery through the claims arbitration diminished the loss to an acceptable amount."

Major programs were inaugurated to facilitate building the tankers without which MRED might easily have been forced into immense liquidated damages for non-delivery. As to these, Lively remarked, "The major concerns were blasting and painting and the outfitting process including electrical design and installation. We found qualified people and developed a process for the job."

Lively endured many long hours of worry and frustration during the tanker program. He said, "It was an unbelievable series of events. After fears of 'what's going to happen next' and my experiences with people saying, 'No problem', we finally turned the corner and our frustrations turned to achievements. I have only wonderful thoughts of the last sea trials and delivery of the last vessel."

Due to the enormous increase in the number of MRED employees during the early months of the Chevron Tanker program, MRED's safety record began to falter. Of this

experience, Lively remembered, "Safety is always important, but never more so than in Marine (the marine department). The DuPont Program was one of the many initiatives I took to turn the safety program around." The DuPont Program was an intensive training program which involved every employee to the lowest rank, all supervisors, every department head and the president of the company.

Promotes safety and health

Another achievement in which Lively participated strongly was the new 1840 square-foot medical center at MRED, which opened in July 1979. Created to handle job-related injuries and illnesses and return-to work programs, it housed hearing and eye test equipment, an electrocardiograph, and X-Ray room. Added later was Lab equipment for testing blood and urine, respiratory testing apparatus, and physical therapy equipment. (See Footnote 1)

Lively also conceived the Return To Duty School for injured employees. He explained, "The school encouraged people to learn (new skills) while getting into shape to return to full time work. The medical facilities eliminated the necessity of transporting injured employees to outside doctors or clinics and enabled them to return to work sooner if their injuries were minor. "

"Safety became the number one program," Phil looked back, "but as the safety issues were faced and safety performance improved, so did production and quality and bottom line performance."

He is mindful of his most rewarding experience at MRED: "The development of a series of equal goals for any manufacturing :

Safety, productivity, quality, cost control and 'Critical C's':

> "Customer, Cleanliness, Care, Consumer, Cash, Control,
> Community Concern, Capital, Coordination, Communication."

Lively continues career in railroading

After 28 years with FMC Corporation, Phil left MRED/FMC in March, 1979 to join Southern Pacific Transportation Co. (S.P.) as Asst. Chief Mechanical Officer. He was Chief Mechanical Officer from 1984 to 1989. He was with S.P. for eleven years. Since then he has been in continuing association with the railroad car building industry as a consultant in manufacturing and transportation. Most recently he has been working with a car repair leasing company and actually built a 'tour train' in 1990-91. In one of his current activities, he is a consultant for Thrall Car Manufacturing Company of Cartersville, Georgia.

Phil and his wife, Joyce, live in Atherton, California. When he is not flying between assignments, he builds radio-controlled model ships (including a scale model of the Chevron OREGON, the first of five gas turbine tankers built at MRED). Then, as if he isn't busy enough, he serves on the City of Atherton General Plan Committee. During the balance of their time, Phil and Joyce enjoy spending carefree hours at their beach home in Santa Cruz, California.

Footnote

(1) See Chapter 27 "Movers And Shakers"

R. H. Spear

Counting ships instead of autos

Mr. R. H. Spear, who had been with the Chrysler Corporation prior to World War II and later with the War Production Board in related positions, became Gunderson's controller on June 1, 1942. He was heavily involved in the financial arrangements that were to give momentum to the growth of Gunderson Bros. Engineering Corporation.

In 1942, Gunderson needed a controller with an extensive accounting background, one who would be approved by the bank. The controller's responsibility was to maintain impeccable records and to regularly provide the bank the required financial statements. As Controller, Mr. Spear set up accounting procedures acceptable to the bank and coordinated the work between the Government and Gunderson. That accounting system endured right up to the time that FMC Corporation took over Gunderson's in 1965.

War bond salesman

On the culmination of each government contract during World War II and afterwards, the contracts would be renegotiated, (reviewed for excess profits). Mr. Spear would represent the company in these sessions and the government got precious little back, so accurate and justifiable were his records.

When it came to community service, Mr. Spear responded with enthusiasm and dedication. During World War II, he headed up seven company war bond drives . He knew how to organize them and selected the proper leadership to ensure their success. He composed catchy, convincing bond drive slogans and persuasive, *Gunderson Gunner* magazine editorials, and during the seven drives raised over $1 million. His hobby, and a profitable one at that, was the stock market. Each day he would scan the financial journals and chart his stocks in order to remain "on top" of the situation at all times.

Mr. Spear retired in 1958.

Mr. Spear was born April 30, 1886 and passed away on May 5, 1983 at age 97.

His daughter, Muriel, was also a Gunderson employee. She retired June 19, 1984 after 42 years with the company. She was Personnel Manager. Muriel is featured elsewhere in these writings in the chapter, "Out to Launch" and in the chapter, "Women of Gunderson". (See Footnote 1)

Footnote

(1) There have been numerous father-son and father-daughter teams at work at Gunderson throughout the years. Some are as follows: Charles "Chuck" Anderson, Jr., son of Charles "Chuck" Anderson, Sr., Rail Car Production Manager, is now a foreman at Gunderson, Inc. Darlene L. Hawkins, daughter of the late Charles H. Hawkins, Controller, works in Gunderson Inc.'s Quality Control Department. Hawkins' son, Kenneth, also worked for Gunderson at one time. He is now an accountant. The late Jack Herron, a buyer in Gunderson's purchasing department, had two sons working there at the same time as he. They were Pete and Tim. Pete was a rigger foreman and Tim was a driver. Julie Ward, daughter of C. Bruce Ward, is Promotions & Communications Manager, at Gunderson Inc.

Chapter 21

Out to launch

The whistle chorus

When a big vessel was launched, one or more tugs were required to corral her and tow her back to the dock for final outfitting. Other tugs and pleasure boats in the river stood by and blew their whistles during the vessel's descent. The adage, "You rub my back and I'll rub yours," rang true in the case of launchings. Good customers like Shaver Transportation and Pacific Inland Navigation took their turns in the launch assists. Then there was L'IL TOOT who went about her business, unseen, unwhistled, unsprayed - as she rounded up the shamble of flotsam and towed it back to shore to be salvaged for the next big event. (See Footnote 1)

One of the City of Portland's fireboats was on hand when the Crowley barge "500-2" was launched in January, 1983. As she did quite often at launchings, the fireboat honored the occasion with a two-spray salute. This fireboat had two "fixed" nozzles that were capable of spraying 10,000 gallons per minute up to 300 feet high. It was an exciting moment. The thrill of seeing the hull racing down the ways and the white blossom of water budding from the fireboat, all the while hearing the dissonant but joyous chorus of boat whistles.

The launch of a barge or ship culminated a team effort by every department of the company. From Sales to Security, the order was shepherded through its phases until the final product was ready to deliver.

Barge and ship tonnages increase

Between 1980 and 1984 MRED built 26 barges, and converted three more for a total of nearly 50,000 tons of shipping, a dramatic increase over the 60's and the 70's. This reflected not only the size of MRED's facilities, but also the increase in the size of barges. A comparison of each decade shows the increase in Gunderson's facility for quantity and size of barges.

The tables below list the barge building and shipbuilding performed by the company since 1940. The numbers given for the first decade may be slightly less than actual, due to the sparcity of early records available:

Barges and boats, non-powered*

Year	Quantity	Total Weight (Tons)	Average unit Weight (Tons)
1940-1949	15	2,250	150
1950-1959	79	18,353	232
1960-1969	46	35,779	778
1970-1979	17	45,324	2,666
1980-1984	25	48,969	1,959
Totals	182	150,675	828

*3100 lifeboats, 511 life rafts and 2,000 folding, plywood pleasure boats not included above.

Ships, tugs, fishing and other vessels*

Year	Quantity	Total Weight (Tons)	Average unit Weight (Tons)
1940-1949	549	13,798	25
1950-1959	223	6,820	31
1960-1969	145	8,653	60
1970-1979	5	54,940	10,988
1980-1984 **	0	0	0
Totals	922	84,211	91

*Does not include caissons, drydock or drydock sections, half of a dump scow hull and two ship's mid-bodies. Large quantities of landing barges (LCM's) and Assault Support Patrol Boats (ASPB's) account for the low average unit weights. Five Chevron Tankers, weighing 10,988 tons each account for the high average unit weights in 1970-1979 period.
**End of study

Largest Structure built by Gunderson – Caissons and drydocks

Year	Quantity	Total Weight (Tons)	Average unit Weight (Tons)
1940-1949	2	1,370	685
1950-1959	4	300	75
1960-1969	3*	9,060	3,020
TOTALS	9	10,730	1,192

* One of these was the Port of Portland Floating Drydock, the largest, single structure (dimensionally) ever produced by Gunderson. It weighed 7,800 tons. Its dimensions were 661-feet long, 140-feet wide and 60-feet high. The only other structure heavier, but not dimensionally as large, was the Chevron Tanker. Five of these tankers were built. They weighed 10,988 tons each. Their dimensions were 650-feet long, 95-feet wide and 50-feet in depth.

Loyal customers gave Gunderson its growth

Gunderson depended on good and loyal customers, for without them its growth and continuity would have been impossible. Gunderson employees were grateful for their business. There were 40 different buyers for the barges, many repeat customers. 75 barges were purchased by the Navy.

But the big tonnage buyer was Crowley Maritime Corporation of San Francisco, a major international marine firm (and its several divisions). They have bought 36 barges to date. Most of the them since the 60's were for transporting pipe, equipment, general supplies and modules, (parts of whole buildings that are ready to occupy). Some were destined for the Alaska trade. These were strengthened for ice conditions and safe grounding for off-loading at Prudhoe Bay.

Puget Sound Tug & Barge Co. of Seattle, now a Crowley Division, bought one of Gunderson's first tug boats in 1956, the 100-foot NEPTUNE. John Lee, President at that time, was a good friend to Chet and Al Gunderson. He came back for barges many times. In 1963, as President of Puget Sound-Van Lines, now a Crowley operation, he bought the 304-foot CLAIR ENGLE, which at the time was claimed to be the "largest barge on the high seas". She had a capacity for 30 rail freight cars. This made it possible for merchants

to ship a railcar direct to Alaska from any place in the United States. She was named for the California senator, whose successful efforts to preserve the Jones Act, prevented foreign flag ships from intrusion into United States waters, (between ports located in United States waters).

Tom Crowley, Chairman and President of the company bearing his name, spoke at the launching ceremony of the barge LA REINA on March 23, 1978. Praising his supplier, Crowley said, "I'm very partial to Gunderson." He always referred to the company as Gunderson, even though FMC owned it. "There is pride in their workmanship. I wish we had it in San Francisco. About 15 major jobs have been done in Portland, including the NEPTUNE, a beautiful job, and the best finished tug we ever got, and now the LA REINA, the world's largest ro-ro (roll-on, roll-off) barge."

Some of the larger repeat customers were Umpqua River Navigation Co. who bought 13 barges including two dump scows; Pacific Inland Navigation Co. who bought ten; and Smith Rice, six, including four dump scows.

Curtain calls

One of MRED's latest customers was Zidell Explorations, whose Chief Executive was Emery Zidell, a long time Gunderson friend and supplier of piping materials, steel and valves. During 1981 and 1982 he bought the 400-foot, 3,000-ton deck cargo barge, Z BIG 1, and three smaller barges. His post-launching reception for the Z BIG 1 was an unforgettable occasion. He paid a tugboat company to have her towed down the Willamette River to the Columbia River, then up the Columbia to just below the Interstate Bridge, where she "curtsied" before his luncheon guests assembled on the viewing deck of the Red Lion Inn on the river.

Howard Hinsdale, President of Umpqua River Navigation Company, who originated the idea of parading new barges before his guests at his post-launch receptions at the Red Lion, bought the first, self-dumping barges ever used on the Pacific Coast. This was during late 1967 and early 1968. In 1962, one of his jobs was to haul rock 300 miles from Columbia River Island, just east of Cascade Locks, to Reedsport on the Oregon Coast. Columbia River Island is solid rock. They drilled holes in the rock and set dynamite charges which blew out boulders weighing 30 tons each. These boulders were hoisted up with a crane and gently loaded for transport to the coast where the battered South Jetty was being repaired.

Hinsdale was presented a plumed hard hat bearing the name, "Sir Launchalot", by Bruce Ward, President of Gunderson, on the occasion of the twin launch of Umpqua barges No. 10 and 11, scheduled for the same day on way No. 4 and ways No. 2. The *Torch & Stinger* labeled the launch, "Eleven before 10". After a ceremony, including an invocation by Reverend Larry Chapman and speeches by Hinsdale and Loran L. Stewart, President of Bohemia Lumber Co., Inc. the parent of Umpqua; Peggy McAlister, daughter of Cal McAlister, Umpqua's General Office Manager, christened and launched Hull No. 11 from Ways #4 with a bottle of champagne. The gallery then moved promptly to Hull No. 10 on Ways #2. Chapman repeated the invocation and No. 10 was christened and launched by Sandi Schaefer, daughter of John Schaefer, General Manager of Umpqua.

Customers were fair in their dealings

Most customers were fair in their dealings. John Hohler, Chief Engineer, Marine, who retired January 11, 1980, told of an instance when Howard Hinsdale arrived at Al Gunderson's office very upset about one of his barges that had "broken its back". It had

been loaded with rock, some pieces weighing 35 tons each, for dumping on a jetty down on the coast. He was irate. He felt that the barge had been designed improperly or that there was a fault in workmanship somewhere. He wanted Al Gunderson to send someone to see the barge immediately and decide what to do about it. John and Howard left at once to inspect the broken hull. John reviewed the barge and its last loading arrangements and he determined the crew had pyramided its load of rock concentrating all of the stresses in the middle of it rather than spreading the load evenly throughout its length. The barge could not withstand so heavy a load at its center. John convinced Howard of the Umpqua crew's responsibility for the damage to the barge. Howard got into his car and drove all the way back to Portland and said that he was sorry that he had been wrong. John said "What a great gentleman he was."

Breaking the 400-foot barrier

The size of barges expanded when the U. S. Coast Guard "400-foot barrier", was broken. John Hohler said that the Coast Guard was against building barges longer than 400 feet because they felt bigger ones could not be built strong enough to withstand the forces of the sea. It was Jim Rettig, Executive Vice President of Engineering, at Crowley Maritime, Inc., Phillip Spaulding, Naval Architect, of Nickum & Spaulding Associates, Seattle, Wahington, and MRED's John Hohler who convinced the Coast Guard that larger vessels could be built that would be just as safe and stable as their smaller counterparts. Years before, it was Crowley who pushed Gunderson over the 300-foot length for the first time. (See Footnote 2)

Why naval architects?

My curiosity made me ask John, "Why do we need Naval Architects?" He explained that these professionals have built upon the experience of their forebears for centuries. Through knowledge of the reasons why ships failed in the seas, each successive failure led to strengthening so as not to be repeated.

One definition of an architect reads, "He combines a knowledge of design and construction, and of the available resources in labor, techniques and materials, to produce a harmonious, durable and functional whole. His building must be fitted for the environment and must satisfy the social needs for which it is required– whether it is a church, dwelling, factory or office building." This definition applies equally to the building of ships.

John said that the dynamic forces acting on a barge and its load when shifting in the water, especially during storms and tides, must be calculated at their worst–then considered in the design. The type of cargoes, such as petroleum, and the stresses they create against the various parts of the vessel, pitching and yawing constantly, must be calculated and protected against. Steels come in many special grades and they can be selected for strength, yet lightness. If you know what you want to haul and the size, weight and quantity of it, the naval architect can design the vessel for you. Oftentimes architects and marine engineers will make actual down-scale models of a barge or ship hull and subject it to the rigors of a miniature sea, emulating actual conditions. One such test was performed with a model of the Chevron tankers built in the 1970's.

Once the architect has designed the vessel, his designs are translated into shop drawings by the marine engineers. The drawings then go to the loft for making of templates from which the steel can be shaped. Many hours of calculation by the engineers result in a bill of material listing all of the steel and equipment which goes into the vessel.

They must be certain they have selected the correct thickness, dimensions and type of steel which will conform to the architect's intent and will result in a safe, sturdy vessel.

Yet, marine engineers must not over-design. They must requisition the thinnest material which will do the job and still provide the necessary margin of safety – no more. If they over-design, the yard wastes money and part of the ship's pay load is lost. Over-design also causes over-bidding and doesn't win business. John has a special respect for Phillip Spaulding. He has worked with Phil on many outstanding barge projects. Phillip Brink and Larry Glosten are other Naval Architects who have the high respect of Hohler. They have all provided their services to Gunderson.

Gunderson's rich shipbuilding heritage

Gunderson's shipbuilding heritage is also due to the loyal, skillful and tireless efforts of its marine men such as Walt Anderson, Charlie Boykin, Pete Brajcich, Jim Childs, Frank Furrow, Ellsworth Gedde, Jack Leonard, Walter MacDonald, Bob McCallum, Johnny Miller, Bob Miner, William "Bill" Owens, Earl Pavey, Herb Perry, Ed Pixler, Glenn Reed, Ray Thomas, and an endless list of dedicated builders.

Ray Thomas, was ground superintendent of marine operations when he retired June 1, 1979 after 32 years as a proven builder and teacher of his trade. There is a chapter devoted especially to Thomas, elsewhere in these writings.

Walt Anderson, Assistant Manager of Marine Operations, began his 32-year career with Gunderson as a marine welder, making $2.03 an hour in 1952. He worked his way up the ladder, starting as a welder. He was subsequently a fitter, and then layer-out on his path. Walt bore the heavy responsibility of managing the building of barges until he retired on February 28, 1983.

Boykin was Manager of Marine Operations for five years until he became Resident Ship Construction Inspector for Sea-Land Services at a Nagasaki, Japan shipyard in January, 1979. Boykin shouldered much of the burden of problems during the construction of the Chevron Tankers.

At Boykin's farewell party, Walter MacDonald praised him for sharing his forty years of shipbuilding experience. "He made some good recommendations on how to construct future barges more efficiently," said MacDonald, "for example, he started us using a pre-construction primer, (paint), and building large barges on a declivity to prevent problems with standing water. We wish him luck."

William R. Galbraith also said of Boykin, "Charlie left us richer than we were before. He directed our yard through a very trying shipbuilding program. The positive effects of his direction will also be felt in future contracts."

Walter MacDonald succeeded Boykin as Marine Construction Manager. MacDonald was a Naval Architect in his own right, and was active in the Society of Naval Architects and Marine Engineers and various shipbuilding research committees. Prior to becoming the construction manager, he and Johnny Miller supervised the outfitting of Chevron tankers at Swan Island Shipyard.

Gedde, a marine fitter, helped build the first barge that came off Ways #4. He also helped build the FLIP.

Lessons learned well

Hohler, who was an assistant to Leighton Johnson as a tank, marine and railcar engineer before he assumed the position of Chief Engineer, Marine in 1967, complimented his "mentors", Johnson, Elmer Kunnas and Billy Love. He said he learned from Leighton to keep cool and not panic. He said that Elmer Kunnas, Chief Lofstman,

called him to the loft frequently to demonstrate, with templates, why some of John's designs wouldn't go together in the shop. "He was a real professional," John said. Love made it a point, one day, to send John out into the field, where a 400,000 gallon water tower was being erected, to let him figure out how to correct a dimensional error he made. The riggers lifted John on a crane boom 117 feet into the air to an ill-fitting steel joint where he and Trav Wirtz, a steel erection foreman, worked out a fix for it. Stepping from the boom to the tank edge was a fearful experience, yet it reminded him that others would taste the same bitter medicine if things didn't fit.

The BETTY L

The BETTY L, a most unusual crane barge, owned by Morrison-Knudsen Corporation, was delivered in November, 1982. She was 420-feet long, 98-feet width of beam and 25-feet in depth. She was fitted with a customer-furnished, 500-ton capacity Clyde revolving whirley crane. She had longitudinal bins capable of containing 4,000 cubic yards of material. She had seven conveying systems to gather and distribute material. There were racks aboard for storing 20-foot pipe sections and a helipad for a 6,000 pound helicopter.

BETTY L's first job was the hauling and laying of 91-ton sections of concrete pipe off coast for the City of San Francisco, $1.5 Billion, 4.5 mile sewage out-fall. Just five days into her intended mission, she encountered severe storms which swept the coast where she was working.

According to the April 19, 1983 issue of *The Daily Astorian* of Astoria, Oregon, when BETTY L floundered during a severe storm, "The barge drifted onto a beach four miles south of the Golden Gate Bridge March 1, 1983 after having run loose for two hours. Swells had parted all its two-inch anchor cables, which were attached to 10-ton anchors. Three U. S. Coast Guard helicopters rescued 10 men who had been aboard the barge. The storms which swept California at the time were so brutal that the Golden Gate Bridge swayed forcing officials to close it," the *Astorian* said, "The SALVAGE CHIEF, based at the Port of Astoria, which was called immediately after the grounding, found conditions no more propitious than the BETTY L had. From the time it freed the 6,800-ton barge (loaded) March 16 until about two weeks ago, the Chief remained in the Bay Area for repairs in a local shipyard and to retrieve four of the five six-ton salvage anchors it had lost during the operation."

The CHIEF had an assist from a Boeing Vertol helicopter which flew tow lines in to the barge. The SALVAGE CHIEF was owned by the Fred Devine Diving & Salvage Inc., of Portland, Oregon. Five of its crew of eight were injured, though none seriously.

The BETTY L was repaired in San Franciso and has had no further mishaps.

The launchings

At each barge launching, those who attended were said to be, "out to launch". Usually, after each launching, there was a reception and luncheon honoring the owner's sponsor of the ship.

Barge and ship launchings were a thrill to behold. Guests of both the owner and builder were invited to watch from a safe distance. When the moment came to release the vessel, she went down the ways at a speed she would never again attain, 20 miles per hour. A steel cable on the release mechanism was cut in two allowing the retaining locks to open, freeing the structure to overcome the friction of its greased skids and slide into the river.

In 1964, Leighton W. Johnson visited the Avondale Shipbuilding Co. in Avondale, Louisiana to look at their side launch ways. Assisted by the knowledge gathered there, he and others designed the present, 650-foot side launch ways for Gunderson. Leighton credited "Big Joe" Huserik for the side launch release mechanism. (See Footnote 3)

Before a barge or ship keel could be laid on the ways, a heavy coat of grease was daubed onto the top surface of the rails on which the barge's cradle rails rested. This enabled the barge to slide easily down the wooden rails into the water once the restraints were released.

The ceremony

A master of ceremony officiated at each launching. He introduced the owner and his party and other honored guests. Then a minister or priest gave an invocation. A few speeches were given by the owner and builder. At first, Al Gunderson was the master of ceremony; later he turned this duty over to Leighton W. Johnson.

Leighton reminisced, "I suppose I will always remember Al Gunderson calling me in one day and telling me to take his place at the launchings. He said very little to me as to why he did not want to do it. My turn at this ended when Bruce Ward and Bill Galbraith came aboard. I do not remember the exact number at which I officiated – five or six, I would guess. The highlight of those launchings was FLIP and the twin launching of the two PC Submarine Chasers on the same cradle." Leighton was a master at speaking, gained from his experience in the Toastmasters.

Recipe for a launch

Planning for a launching ceremony must have been a chore. Numerous details were necessary for it to come off without a hitch. Formal invitations were sent to friends of the customer and the company, requesting the pleasure of their company at these launchings.

Many of the launchings were on a Saturday so Gunderson employees and their families could attend.

In addition to the ship, each launching required two special components: one was the sponsor who christened the ship; the other was the bottle of champagne she broke on the ship's bow before the ship could be sent down the ways.

The carpenters rigged up a raised platform with stairs running up them, then others draped it with bunting and bouquets of flowers. It was here the owner, his sponsor and other dignitaries were seated for viewing the launching.

Planning by public relations

Here is the check list, prepared by Bruce Harmon's public relations group, for the Christening and Launch of Alaska Marine Lines' ARCTIC PROVIDER, GB Hull 34, launched December 16, 1983:

I. Prepare all press arrangements
   - A. Formal press invitations
   - B. Write release for event
   - C. Alaska Marine Lines, FMC clearances
   - D. Invite press
   - E. Make press kits
   - F. Set up press table, sign, chairs, (gate)

II. Program
   - A. Print invitations
   - B. Print programs

C. Prepare agenda of events (William R. Galbraith)
D. Write speeches if necessary
E. Seating chart
F. Dignitaries assembly & parking

III. Photography
A. Camera location & position crane
B. Group photos for dignitaries
C. List of photographers

IV. Parking (Coordinate with Alex Johnson)
A. Dignitaries
B. Press parking
C. Dignitaries route to Ways 4

V. Platform
A. Verify placement
B. Christening sign, 3' x 4'
C. Flags: l. U.S. & Oregon on platform
1. FMC-Christening platform
2. ABS, Coast Guard
3. AML & Lynden (Owner's flags)
D. Chairs for platform
E. Podium with FMC sign
F. Sound system
G. Bunting
H. Bottle, spare, breaker and tethers
I. Casket preparation and plaque
J. "Hit me" stencil on hull and paint.
K. Umbrellas for sponsor and platform
L. Coffee and doughnuts for work crew
M. Coffee and doughnuts for dignitaries
N. Flowers for sponsor

VI. Dress ship
A. Bunting and pennants on rails
B. Union Jack on Bow, FMC on Mast, Ensign on Stern
C. Launch horns

VII. Crowd Control
A. Medical Dept. - Nurse & Ambulance
B. Announce in *Torch & Stinger* and on Communication Centers
C. Arrange time to open gates (Alex)
D. Ropes for crowd control (Alex)
E. Guards for crowd control (Alex)
F. Refreshments & doughnuts for crew
G. Toilets (Check with W. MacDonald)

VIII. Reception
A. Lobby sign
B. FMC Napkins - cocktail and dinner
C. Bring champagne casket

IX. After launch - clean up, stand

X. Photography, distribution to press

A mark opposite each item on the check list above indicated every detail had been handled. Alex Johnson, mentioned above was Chief of Security.

"Bottle, spare, breaker and tethers," refers to a bottle of champagne wrapped in bunting; the spare was an extra bottle in bunting; the breaker was a small, U-shaped magnet which clings to the ship's side and makes a good knob to ensure the bottle-breaking; and "tethers" meant a rope one end of which was tied to the ship's rail and the other end to the bottle so that all was not lost if the ship got away before the sponsor broke the bottle. A deck hand could take over and finish the job before the hull hit the water. Heaven forbid!

The casket referred to was a finely crafted, richly finished mahogany box with brass, hinged lids and brass corner protectors in which rested a souvenir bottle of champagne wrapped in bunting. It was presented to the sponsor after launch.

Not mentioned in the above check list was the gift to the sponsor. Usually, after each launching, a reception and luncheon was held which honored the owner's sponsor of the ship. At the reception, the sponsor was presented a lovely piece of jewelry or crystal as a remembrance of the occasion.

All of these things added to the cost of doing business whenever there was a launch. Some examples of these little items that added up at the launch of ARCTIC PROVIDER, were: builder's plaque, $60; videotaping, $100; programs, $280; plaque for bottle, $25; photos $300 to $900 and coffee, $51.

Wrapping the champagne bottle

Muriel Spear, daughter of R. H. Spear, prepared the champagne launching bottles since 1947. In a July 31, 1964 news article, Suzanne Richards, *Oregon Journal* Staff Writer, gave the details of Muriel's art.

"Ever wonder how the champagne bottle used to christen a ship got so gaily wrapped and attached to the ship, always at the right moment?

"It takes a great deal of know-how, quite a few feet of satin ribbon and an 'official bottle wrapper' like Muriel Spear."

Short Notice

"Miss Spear, Personnel Manager at Gunderson Bros. Engineering Corp., had wrapped bottles for the company's launchings ever since one morning in 1947. That initial experience came about when company officials announced at 8 a.m. that there would be a launching at 10 a.m. and asked her to prepare the bottle.

"Previously a girl in the shipping department had handled the bottle preparations and other than watching her, Miss Spear had no experience. 'I just sort of worked it out, she says, admitting that since, she has improved on that original bottle." A lady named Gerry, who worked in a garage nearby and who normally did the task, somehow missed work that morning and the bottle couldn't be found.

Muriel told the officials that she needed more advance notice and asked to take a few bottles home so that she could do several ahead of time. The original two-hour notice was cutting it a little close. Varying the colors on occasion she finally settled on red, white and blue for the ribbons, Ms. Richard's continued, "White champagne is always used to insure the vessel and crew good sailing and the wine is purchased by the case. A cheesecloth wrapping is placed over the bottle to protect against spraying glass and then ribbons are firmly attached at the base. She begins working in a basket weave, topping the bottle with big loops and bows. A sufficient amount of ribbon is left to attach it to a line from the vessel.

"Once a bottle was broken when it was being hung on the ship, and ever since Miss Spear has had an extra on hand. Occasionally a mighty crack against a ship fails to break the bottle. Because it is considered bad luck for a ship to touch water before it is officially christened, a deck hand must grab the bottle and break it."

Muriel had several inquiries from other shipyards on how to prepare the launching bottle.

When Governor Mark Hatfield dedicated the Port of Portland's new floating drydock in 1963, she wrapped a bottle of Oregon apple juice for that christening.

Muriel has wrapped more than 200 bottles and has christened a ship herself. During World War II, they gave ships only numbers instead of names. "When Miss Spear's turn came, she held her bottle for an hour while speeches were given and dignitaries introduced. Then when the big moment came, the ship had moved away from the platform and she had to be lifted over a rail to get within striking distance. But she did herself proud–she broke the bottle with one mighty whack!" It was Leighton Johnson, master of ceremonies, who came to her rescue, by lifting her over the rail.

Muriel passed on her art of wrapping christening bottles to Julie Ward in 1986 and then to Yvonne Dubb in 1990. Yvonne continues to wrap the christening bottles for Gunderson as of this writing.

Muriel retired in June, 1984 after 42 years. She came to Gunderson Brothers in October, 1942 shortly after the Front Avenue plant opened for business. She left an $80 per month clerk job at Lipman's department store for $100 per month as a file clerk at Gunderson. Within six years, Muriel was Personnel Manager. She was one of only eight women employees of the 250 total at the time she signed on with Gunderson. During the years before the computer, all employee checks were signed by hand. She signed 400 to 800 checks every Thursday. "Believe me," she said to a *Torch & Stinger* reporter, "I know the definition of writer's cramp." Despite a heavy workload, she was a conscientious, helpful and industrious person. Many Gunderson employees benefited from her aid and counsel.

Some launches stubborn, others voluntary

There have been some humorous experiences during launchings. One occurred in July of 1953 when a cargo barge turned "mule" and refused to be launched during flood stage. A crane barge and the sternwheeler, CITY OF PORTLAND, were hired to lift the river end of the barge and pull it out into the river. In a mid-winter launching, the launching grease, smeared between the two, wooden ways rails and the hull's cradle skids, was frozen stiff and she wouldn't budge. All of the spectators put their shoulders to the hull and it moved slowly, like a snail, for a long time until the pressure of its heavy weight and movement warmed the grease enough to overcome the friction and away she went.

There were unfortunate incidents too. A news reporter was on hand at a launching, with camera poised, standing in an unauthorized area down near the bottom of the ways near the river bank. As the vessel picked up speed, a loose cable hanging from its side whipped a knot around the end of a timber lying along side the ways and carried it like a toothpick toward the river. The timber upended the reporter, and though the injuries were not fatal they were serious enough that he sued the company for damages. Chet Gunderson was also standing down the ways right in the timber's path, but he saw it coming and jumped out of harm's way. From that time on, strict discipline was observed regarding launching viewpoints.

And there are the ones that got away (believed to be the COLUMBIA, a pilot boat purchased by the Columbia River Bar Pilots, 1958). On another cold day early in

Gunderson's boat building experience, the launching grease was too stiff and the boat wouldn't move. It was decided to postpone until the next day. That night when no one was around she launched herself. Fortunately someone spotted her in the river in time to corral her back to the dock.

Railcars also launched

During the launching ceremony the customers were acknowledged and honored. They were given the spotlight on center stage. Even the railcar department adopted the idea and several railcar projects were inaugurated in that way. Not to be outdone by Mrs. Thomas B. Crowley, who christened El CONQUISTADOR with champagne in September , 1979, Mr. Don E. Ghent, Executive Vice President of East Camden and Highland Railroad, christened the first of 200 cars for the 43-mile short line in Arkansas. A few weeks later Mrs. Willis Kyle, wife of the owner of the Yreka Western Railroad Company and the Oregon Pacific & Eastern, splashed champagne on the first car of an order for 200 cars.

On August 14, 1987, Oregon's Senator Bob Packwood "launched" the 5,000th car built since the company's new owners took over February 28, 1985.

The sailing papers

Barges were usually paid for by the customer in progress payments, i. e., so much down with the order, more when the materials were on hand and payments for certain stages of completion.

Each barge had a name, number or both stenciled on both sides of its bow. Sometimes, to make the letters look as if they were raised, the stencil was surrounded with an expensive, welded steel bead, or raised surface deposited in a molten state by a welder. Such was the case of the ARCTIC PROVIDER, an Ice-breaker barge for Crowley.

There was plenty of serious business in the marine engineering department before a ship could be signed off and paid for. Terry Halpin, Marine Engineering Manager, furnished background information on what documents and certificates were required.

Most vessels were built to strict, regulatory standards, for example, American Bureau of Shipping (ABS) Rules For Construction. The shipyard, before delivery of the vessel, was required to obtain certificates of approval from this and other bodies, as proof to the customer that his ship was built in conformance with rules. ABS Barge classification certificates outlined the dimensions and registered tonnage; and assigned a class to the barge depending on its cargo and its operating waters.

Another ABS certificate was a Load Line Certificate which certified to freeboard and load lines dimensions which the vessel experienced in tropical, summer and winter waters, all of which the marine engineers calculated. Halpin said the load line was a line that showed the maximum draft that the vessel could be loaded to. It only applied to ocean going vessels, and was governed by international agreement of maritime countries that have signed the Safety of Life at Sea Convention or SOLAS. The instructions said that the load line symbols were to be permanently marked on the ship, as by center punch, chisel cut or bead of weld.

The United States Coast Guard (USCG) also had a say, in that their rules provided the crew with a safe working and living environment on a stable ship. According to Halpin, "A USCG certificate of inspection is issued to the owner to signify that the vessel has been inspected by the USCG during construction, and at the time of delivery meets all USCG requirements applicable to the type of vessel."

An official hull number, such as the number, 624235, is a "unique number assigned by the USCG that must be 'carved' into the main beam of the vessel," Halpin advised. "Today, we would weld the number onto a main steel beam. The number shows that the vessel has been admeasured and documented as a U. S. flag vessel and meets USCG requirements. The number will appear on all the vessel's documents."

Still another requirement calls for a Certificate of Deadweight, per Halpin. "After launch, a survey of the light ship draft is made, from which the light ship weight is verified. By calculation, the load or cargo deadweight that will sink the vessel to the load line is determined. The owner is then given a certificate showing how much cargo the vessel can legally carry."

There were certificates such as the ones required for transiting of the Panama Canal and Suez Canal. The Chevron tankers met both of these guidelines. Crowley's LA PRINCESA met the Panama Canal's transit dimension criteria with just inches to spare. The ships' dimensions were used by the canal zones to arrive at gross volume or cubic footage. The volumetric measure was converted into gross tons and this was the basis of taxation and levying fees such as port dues and canal transit fees. (One gross ton was taken as a volume of 100 cubic feet).

When Zidell's Z BIG 1 was delivered, a Protocol Of Completion And Acceptance was issued by Doyle Thomas, Contract Administrator for FMC Corporation. A brief legal document, it simply said that on December 8, 1981, pursuant to the Vessel Construction Agreement, the yard completed the vessel and the Owner simultaneously accepted it.

There was a Builder's Certification, or Master Carpenter's Certificate furnished to the owner. It was essentially a "bill of sale". It outlined vessel data, place of construction, completion date, customer, and certified the percentage of the vessel that was built in the United States. Terry Halpin or his predecessors were required to sign the certificates.

There was a Declaration of Warranty and Release. This warranted that the vessel was free and clear of all liens, encumbrances and rights of shipbuilder, workmen, contractors and subcontractors.

In the case of the Crowley barges, LA PRINCESA and her three sister ships, a Deratting Exemption Certificate – "Certificat D'Exemption De La Deratization," in accordance with International Health Regulations, was obtained from the Quarantine Officer, Portland, Oregon. This warranted that no compartments aboard the unmanned vessel were presently inhabited by rats and when, if ever, the use of traps and poisons were used.

Barge looks prettiest on launch day

If there is any event that can be singled out as the highlight in the life of barge or ship, I believe it is the day she is launched. She looks her prettiest. She has just been freshly made up with paint and bunting. She has her first and last quaff of sparkling champagne. It is the only occasion that she'll ever travel so fast, and on Gunderson's ways, even sideways! That is the day she gets her most loving attention, praise and applause. It's when she gets her sailing papers. And it's the day that those who gave birth to her are proudest of their accomplishments.

WHY IS A SHIP A SHE?

"We always call a ship a she
And not without a reason.
For she displays a well-shaped knee

Regardless of the season.
She scorns the man whose heart is faint
And doesn't show him pity.
And like a girl she needs the paint
To keep her looking pretty.

"For love she'll brace the ocean vast
Be she a gig or cruiser,
But if you fail to tie her fast
You're almost sure to lose her.
On ships and dames we pin our hopes,
We fondle them and dandle them;
And every man must know his ropes
Or else he cannot handle them.

"Be firm with her and she'll behave
When skies are dark above you,
And let her take a water wave
Praise her, and she'll love you.
That's why a ship must have a mate.
She needs a good provider.
A good strong arm to keep her straight
To comfort her, and guide her.

"For such she'll brace the roughest gales
And angry seas that crowd her,
And in a brand new suit of sails
No dame looks any prouder.
The ship is like a dame at that
She's feminine and swanky,
You'll find the one that's broad and fat,
Is never mean and cranky.

"Yes, ships are ladylike indeed
For take them altogether,
The ones that show a lot of speed
Can't stand the roughest weather."

The above poem is from the Fred Olsen Interocean Line BULLETIN and appeared in the *Torch & Stinger*, December, 1975.

Footnotes:

(1) See Chapter 13, "L'IL TOOT".

(2) See Chapter 11, "Floating Football Fields" for the names of the barges breaking the 400 foot barrier.

(3) See Chapter 17, "Big Joe Huserik".

— Smoke Stack to Twin-Stack —
The New Gunderson

Chapter 22

Gunderson Inc. is reborn

In 1982 and 1983 FMC began warning John A. Carroll, Jr., MRED President, that MRED would be sold unless it returned to profitibility. Considering the rapid reversal of its railcar business, a slackening of the barge market, and the hectic Chevron tanker years, such a move seemed inevitable.

FMC had generously carried the division through three marginal years, but then it began to send out feelers to sell the company.

FMC lifts MRED to excellence

For nearly twenty years since 1965, when it took over the Gunderson operations, FMC shared its technical expertise and financial resources with MRED. FMC financed the expansion of MRED's carlines, barge facilities and the purchase of the latest machinery, making them razor-sharp competitive. Gunderson, under the wing of FMC Corporation, rose from a very small railcar builder to one of the largest and most efficient in the nation. Its marine facilities were equally excellent.

The Gunderson brothers never took the time necessary to implement a pension plan when they still owned the business. Within six months after FMC bought the company, FMC introduced a pension plan. Long-term employees received the maximum credit for their Gunderson service in calculating their pensions. There was a stock purchase and thrift savings program for all qualified salaried workers. Health and life insurance were made available on a much broader scale. Everett B. Hill, retired head of maintenance, said, "The best thing that ever happened (to the company) was when FMC took it over and gave us a pension. Not only that, we were able to save money and buy stock with a percentage of our income and FMC matched it. That actually was what made us, you might say, independent. We're able to live a 'little higher off the hog' than we could have." He said it very well for a lot of Gunderson employees.

Rumors of MRED'S sale hit streets

In 1984, speculation about FMC's possible sale of the company was supposed to be a closely held secret. But rumors were rampant on the streets of Chicago and San Francisco where railway industry sales and purchasing people had their offices. It was just a matter of time before the axe would fall.

MRED employees felt devastated by the pending sale. To add to their despair, they heard rumors of liquidation or of closing down the operation entirely. As these rumors circulated among the workforce, morale was affected.

Ward used "to running something"

In November 1974, Bruce Ward had resigned as President and General Manager of MRED and took a job at FMC headquarters in Chicago as Marketing Development Director at FMC's Machinery Group, and later was named Regional Vice President of FMC. He said it was a big transition for him–that he had been used to running something

and now he became just part of a staff. He found that decisions were mostly made in committee and he didn't relate to that very well. He left FMC in 1978 on a pleasant note and "didn't burn any bridges" behind him.

He moved back to Portland and worked briefly as a Vice President at American Steel Company then later co-founded the Western Acquisitions Group, a firm that specialized in corporate mergers and the sale of businesses.

For a short time during 1982, he formed a partnership with a Chicago sales representative and sold railcar specialties on the West Coast during the flattest market in two decades. One of his major lines was the Japanese-made, Koyo freight car roller bearings, a high ticket item costing over $1,000 per carset.

He then spent four months on temporary assignment as President and Chief Executive Officer for American Guaranty Financial Corp. "trying to untangle its web of financial problems stemming from soured investments". His attorney advised him to get out of there and, after a disagreement with members of the company's board, he resigned and returned full time to his duties at Western Acquisitions.

Bruce began hearing about MRED's problems and the same rumors that FMC was going to sell the division. Renewing his ambition to "run something", Bruce announced to some of his friends over after-dinner drinks at a bar called the Faucet, that he would like to buy MRED.

Details of acquisition of MRED

Eric Goranson, staff writer for *The Oregonian*, interviewed Bruce and detailed some of the the mechanics of the MRED acquisition. Goranson accurately captured the essence of Bruce's usual clear, conveyance of thought, so I am quoting some of his writings here:

"We moved to Chicago with FMC where I spent half of my time in staff meetings. I didn't like staff work and being in the Ivory Tower. We missed the mountains, our friends, and believe it or not, the rain. I didn't like living in the Midwest. It is important that you like both your job and where you live and have friends. You can do without one when you are in business, but not when both are negatives.

"Ward said he was aware the Portland operation was losing money in recent years and speculated that FMC might want to unload it."

In February, 1984, Bruce started working on the acquisition. In March, he arranged to have lunch with Robert H. Malott, FMC Chairman and Chief Executive Officer. He told Malott of his interest in buying the company.

Malott suspected "moles in his office" of telling Bruce what was going on. But Malott admitted, "We just decided two weeks ago to sell. Are you interested in buying the company?" Bruce said, "Yes I am." Malott asked, "Do you think you could put together a proposal?" Ward affirmed he could, and Malott was on the phone with John Furrer, who was in charge of mergers and told him to expect an offer from Bruce and to work with him on it. Furrer instructed Bruce to work with John Carroll who was president of the MRED division and was told to keep his meetings with Carroll away from the plant "so as not to stir up the employees". These meetings occured over a two-month period.

Ward makes offer to buy MRED

During May 1984, Bruce went to Chicago with an offer, based on a financial analysis of the company. Furrer thought Bruce's initial offer was ridiculous. Nevertheless, Bruce was told to return to Portland and put together a business plan and reconsider the offer price.

Goranson continued, "More talks ensued, but the two sides could not come to terms. FMC said it was talking with other interested parties, Ward said.

"After 'sitting out all summer' wondering what was happening, Ward got a call from FMC saying if he was still interested, he should put together a proposed capitalization plan."

Seeks financing

About Mid-1984 after Bruce had put together the second of the first two proposals to FMC, he took it to all of the banks and major lending institutions. At best he received a mixed review. Other obstacles were the risk and the bad economy. Bruce said they asked, "What makes you think you can make a success of the business any better than FMC could? When you're asked a question like that you kind of wing it and say, 'I'll cut back to skin and bones. I know how to market the products.'"

Bruce then went to see Blake Hering, then president of the Port of Portland. Hering suggested that Bruce make a pitch to the Oregon Investment Council which invests state employee pension money, "to see what could be done."

Ward receives's governor's backing

Bruce contacted Governor Victor Atiyeh for directions on whom to approach at the council, and the governor suggested he approach Roger Meier, its chairman.

According to Goranson, Bruce convinced the governor's office that, "It would be a 'disaster' if outside interests acquired the FMC plant because, in all likelihood, they would liquidate and sell off all the equipment in the plant. Jobs would be lost permanently not only at FMC, but also at Portland's steel plants because FMC was a heavy buyer of locally produced steel. Ward argued that Oregon's pursuit of high-technology companies was all well and good, but that the state also needed basic industries if it were to have a well-rounded economy." Bruce won Atiyeh's support and went to see Maier.

Bruce elaborated, "I realized they had lots of money to invest and they were chaired by Roger Meier, who ran it well, albeit autocratically. I made an appointment with Meier and told him what I wanted to do. I told him, 'We're looking at continuing a business and creating new jobs in a hard core rust belt industry (the steel business). Oregon needs a diversified economy and can't depend solely on the high tech businesses in Oregon.' Meier listened very patiently. After he had heard me out he gave me a 20 minute lecture about the investment council. He said, 'We're not an economic development organization. Our responsibility is investing public employees' funds, not lending money, you should be talking to lenders. I couldn't loan the money directly but if you could get a major bank or other lender interested and put a financial package together and if I thought it was worth while I could buy a participation investment of up to 90% of the total deal.'

Snoops around looking for lenders

"I snooped around and immediately thought of Standard Insurance Company," Bruce related, "A friend, Lou Perry, had just stepped down from Chairman of Standard but was still on its board and still very influential. Benjamin R.Whitely had taken Perry's job as Chairman. I called Perry for lunch and spelled out my proposal and Perry said it sounded good, but Whiteley's opinion was the key. Over lunch, Perry discussed the matter with Whitely, telling him what Meier had told me. Whitely said 'Very interesting, let me get back to you.' Two days went by; Whitely called. We were lucky, the timing was perfect. That's when I got together with Wayne Atterbury, an officer of Standard. He called and

said he had been advised to get together with me. Wayne, James "Jim" George of the State Treasurer's Office, who represented Roger Meier, and I got together and the three of us put together the package. Ken Stephens and Morie Galen were the attorneys who assisted in writing the proposed financing package."

In October, 1984, FMC finally agreed the price was something they would consider and instructed Bruce to draft a definitive offer. Stephens and Galen drafted the agreement for Bruce and sent it to Chicago. Bruce said later the price they agreed upon was the original number he had offered almost one year earlier. Three weeks later an FMC lawyer called and asked for some changes in the offer. During the first part of November, Bruce agreed to the changes, sent it back to FMC and asked them for an exclusive right to negotiate the transaction.

Plug almost pulled

Once again FMC wanted more changes and in late December, on a Friday, Bruce's team was in the process of redrafting the third offer. Bruce was about to leave for California for Christmas when a call came from FMC's Bill Matthewson to say another group had been given exclusive 30 days to buy the company. Bruce said, "You've got to be kidding, we're in the third draft of a definitive agreement; what's going on? This whole thing stinks!" (Later Bruce discovered the other group was Keystone Investors of Seattle.) Bruce immediately got hold of Stephens and Galen. Here they had negotiated a financing package and had put it almost totally in place. Bruce had to make a decision whether or not to "pull the plug" on the financing package with Standard and the State. He decided to let it run. He said, "I was so depressed I thought someone had ripped my heart out, to have this happen after the third draft of a definitive agreement in the bargaining process."

Greenbrier, likely equity partner found

It was about this time that Bruce looked for and found interested equity partners. While he explored his competition for the buyout he found that Keystone Investors of Seattle, Washington was the suitor who was dealing with FMC.

At the same time he also found out about Greenbrier Leasing Corporation who had some dealings with Keystone. This information led him to William "Bill" Furman, President and Chief Executive Officer and Alan James, Chairman, who were co-owners of Greenbrier's parent, James-Furman & Co.

Greenbrier was a likely partner because it was already railroad oriented. A part of their business was buying surplus railcars from railroads, refurbishing them, and leasing the refurbished cars to shippers. At the time of the MRED buyout, the Greenbrier fleet totaled nearly 2,000 intermodal and about 500 other cars, most on three to four-year leases.

How Ward, Greenbrier got together

The following account of how Ward and Greenbrier's Bill Furman got together was written by C. Bruce Ward:

"In late December, 1984, when FMC was in closed negotiations with Keystone, I discovered through Bill Galbraith, that Greenbrier Leasing was talking to Keystone about some form of joint-venture, should Keystone acquire the Portland operation from FMC. I didn't know anything about Greenbrier but I called Bill Furman at his home and told him who I was and that I would like to meet with him to discuss the FMC situation. This

occurred on a Saturday afternoon and he agreed we should talk about this; we met in a motel bar in Tualatin about three hours later.

"I related to Bill what had transpired between me and FMC during 1984 and the fact that they had pulled the rug out from under me in Mid-December. I also told him that I had only recently found out about Keystone and that Greenbrier was somehow associated with their offer to acquire the FMC operations.

Greenbrier unaware of pending sale of MRED

"Bill was surprised to learn that I had been working on a deal to purchase the FMC operation since March of 1984 since Greenbrier had been investing a substantial amount of money in a joint R&D (Research & Development) project with MRED to develop a double- stack container car, and MRED had been accepting payments from Greenbrier all during the year without disclosing to Greenbrier that the Portland operation was on the block. He only learned of the pending sale late in 1984 through Keystone and had been in serious discussions with Keystone in an effort to protect Greenbrier's R&D investment should Keystone become the eventual owner. At the time, I didn't know what form of venture Keystone and Greenbrier were discussing but I got the impression that Bill Furman was not comfortable with Keystone or with the way their discussions were proceeding.

"I outlined for Bill what the basis was for my offer to FMC and that I had an agreement in principal for the State of Oregon Public Employees Retirement System (PERS) and Standard Insurance to provide the financing necessary to complete the deal. Bill suggested that he arrange a meeting for me with some of the Keystone people to see if there was a way for me to participate in their deal and particularly to utilize the financing package which I had arranged. I left that initial meeting with Bill with mixed emotions; it seemed likely that Keystone was going to do the deal with FMC which was disappointing, but I felt that I had a better understanding of what was going on and I was impressed with Bill Furman's forthright attitude and the position that Greenbrier was in relative to their R&D investment.

Furman arranges meeting with Keystone

"The following week, early January, 1985, I was advised that a meeting had been arranged with Keystone at the Red Carpet room at the Portland airport for a late afternoon one hour meeting. At the meeting was one of the principals of Keystone and one of their financial people. We discussed what their plans were for MRED in broad terms and I discussed with them what I had been doing and the financing I had arranged, also in broad terms. The meeting was probably only 30 minutes in duration and I left feeling that they had only been there because Furman had asked them to do it and further, that they really weren't very interested in anything I had to tell them.

"About the middle of January, I received a call from Bill Furman asking if I would meet with Norriss Webb, Greenbrier's Vice President and Chief Financial Officer. Norriss and I met for lunch at the Rusty Pelican at John's Landing and had a very cordial lunch. I got the impression from Norriss that the deal with Keystone was not going well because of excessive demands by Keystone regarding Greenbrier committments to guaranteed amounts of new car business over a period of several years. We also discussed my need for an equity partner should I become the successful bidder for the FMC property. Norriss wanted some detail on the financing arrangements I had with the State of Oregon and Standard Insurance which I was very reluctant to disclose.

Proposed Ward-Greenbrier roles

"During the following ten days we had further discussions about Greenbrier playing some role in the acquisition of the FMC property with BW Industries (a company set up by Bruce in 1984 to make the acquisition). This culminated in an agreement by me to sell an option to Greenbrier to purchase stock in BW Industries which would provide the equity capital for BW Industries to complete the deal to purchase the FMC operations. It further provided for a complete disclosure to Greenbrier of the detailed terms of the financing package with the State and Standard Insurance and, in turn, their disclosure to BW Industries of the details of their R&D project with FMC. This agreement also provided options for me to repurchase enough of Greenbrier's interest in BW Industries to restore me to majority ownership if we completed the purchase of the FMC property and if other conditions were met regarding the future profitability of the company and the expiration of a certain period after the closing."

At this point, I interrupt Bruce's narrative to insert the following details told to me by Bruce:

On learning of the details of the financing package that Bruce had outlined to Webb, William A. "Bill" Furman called Bruce and said he "couldn't believe the proposal." He asked Bruce to take Webb to Meier's office in the Pacwest Center so that Webb could hear first hand of the participation deal. Bruce made an appointment with Meier. Webb accompanied him, and informed Meier that he (meaning Greenbrier) might be Bruce's equity partner, and needed Meier to affirm that he could and would approve the financing deal. Meier assured Webb that he could and would approve a participation investment on seeing an acceptable loan package from the lenders. He said there was no problem with the deal; he considered it only a drop in the bucket compared to the hundreds of millions of dollars invested by the council; and what he had seen of the finacing package put together with Standard Insurance looked very good.

Keystone-FMC negotiations fail, Ward wins bid

Bruce's written narrative now concludes:

"I was aware that the Keystone-FMC exclusive period expired on January 15, 1985 and not hearing any news about a purchase by Keystone, I was becoming anxious to know what was going on. After discussing this with Bill Furman and Norriss Webb, I called Bill Mathewson at the FMC Corporate office on January 25th. Bill advised me that they had given Keystone an extension to January 20th and since it was now January 25th, FMC decided they should terminate further negotiations with Keystone and look elsewhere and was BW Industries still interested. I assured him we were and were prepared to move toward a quick closing. Mathewson called back later that Friday and advised that their lawyer, Bob Day, was not available on Monday but would be on Tuesday. On Monday, January 28th, Ken Stephens and I were on a plane to Chicago and after two days of intensive negotiation we finalized an agreement to purchase the FMC operations in Portland. The deal was closed and title was transferred on February 28, 1985 at the offices of Tonkon, Torp and Galen in Portland."

Goranson put it this way, "Ward, Greenbrier and Standard went ahead 'crossing T's and dotting I's in working out a final agreement on a financing plan while Ward kept looking in the newspapers daily for announcement that the Portland plant had been sold. When the sale deadline of January 15 passed and then January 25 went by with no news, Ward said he finally called FMC to find out what was happening. It was the first contact since December 21."

On January 29, Bruce got together with John A. Carroll, FMC's MRED Division President, and agreed to jointly approve all transactions during the transition of ownership. By February 28, 1985 all financing and other details were completed, FMC was paid for, the company and the transfer of ownership was completed.

Although the purchase price was never disclosed, it is estimated to be about $10 million. Some additional funds were borrowed for working capital. Aside from the down payments by Ward and Greenbrier, Standard Insurance Provided about 10% of the loan and Oregon Investment Council provided the remaining 90%

Gunderson issues first new release

At 10:00 A.M., March 4, 1985, the new Gunderson Inc. issued its first news release. These comments by the two owners and the two major lenders below expressed the confidence in the future of the newest player in the regional economy:

"We're excited about the public and private sectors working together to keep business in Oregon,' said Ward, Gunderson President. 'Thanks to state treasurer Bill Rutherford and Standard Insurance Company, we've been able to form the new Gunderson Inc.'

"Oregon must keep its heavy industries,' said Rutherford. 'Gunderson will consume thousands of tons of material from Oregon suppliers. We think this new company is a good example of how we in state government ought to be using our support to help maintain that kind of important economic balance.'

"This investment is consistent with our corporate philosophy to foster a healthy business climate in Oregon,' said Benjamin R. Whiteley, President of Standard Insurance, a major participant in the fast-growing Sunset Corridor economic development area west of Portland.

"In 1984, FMC and Greenbrier Leasing Corporation entered into a joint development contract, funded by Greenbrier, to design, engineer, and build a new railroad car capable of carrying double- stacked intermodal containers. The result of this partnership is the new Twin-Stack railcar which is rapidly gaining acceptance from the railroad industry and major container shippers nationwide. The success of this new product and FMC's subsequent decision to divest the Portland division encouraged the investors to make the acquisition. (This was the investment referred to earlier during Ward's first meetings with Furman.)

"Furman added, 'We at Greenbrier are proud to assume a major ownership position with Gunderson in this all-Oregon acquisition and to share in Gunderson's future growth. We believe the Twin- Stack railcar will be tremendously successful and hope to be a major customer of Gunderson as we build our intermodal freight car fleet.'"

Gunderson gets its old name back

When the acquisition announcement finally came out, MRED employees were pleased to learn that their "old" boss, C. Bruce Ward, would hold that job again, this time as part owner. They remembered and liked his management style, which he defined himself in an interview with Ramona Ruel a Portland journalist, "We try to make sure that every one feels like they're an important part of the company and give them growth potential. The benefits are the same for all employees." Everett B. Hill, a retired MRED Maintenance Superintendent, expressed it so well, "I don't think anyone could work for as good a man as Bruce Ward. He was a nice fellow."

Ward exercised his right to rename the company along with the purchase. Respecting his earlier beginnings with Gunderson, Ward named the new business, "Gunderson Inc."

Senator Packwood assists Gunderson Inc.

When the Tax Reform Act of 1986 was passed, Gunderson Inc. through the efforts of Bruce Ward, Bill Furman, and James A. Beall, attorney with the firm of Ball Janik, working with Senator Bob Packwood, were able to benefit from a transition rule amendment included in the act. This transition rule amendment and several other amendments of a like nature were included in the act by Packwood and other Senators.

A Gunderson Inc. news release, dated August 14, 1987, covered Packwood's champagne christening of the 5,000th railcar produced since the new company was formed: "Packwood protected Gunderson Inc. with a tax transition rule. The transition rule, added to the tax reform bill, preserved the investment tax credit and more favorable depreciation for up to 1,150 railcars Gunderson had already contracted to build but had not built prior to the tax act. These tax benefits preserved between 500 to 700 jobs in Portland and generated an economic value of $35 Million."

Bruce Ward said, "It was Packwood's desire to help an Oregon Company. Jim Beall, who lobbied the issue for Gunderson with Packwood, Chairman of The Senate Finance Committee, deserves the major share of the credit for that." The orders affected were 800 double stack car platforms for Sea Land Service, Inc. and 350 for the Santa Fe Railroad. Gunderson had spent more than $3 million on the two deals and had obligated a lot more before the bill was passed.

Greenbrier's history

William A. Furman, Greenbrier, President and Chief Executive Officer, and Alan James, Chairman, are co-owners of Greenbrier's parent, James-Furman & Co.

According to *The Oregonian*, March 10, 1985, Furman became an FMC employee in San Jose after college. He "was instrumental in forming and operating FMC's $50 million sales Finance Division until 1971. He then joined Trans-Pacific Financial Corp. in Portland as Vice President, distributing White and Freightliner trucks. Furman, 40, was born in La Grande, Oregon, grew up on his grandparents' grass seed farm at Imbler, worked six summers as a smoke jumper for the Forest Service, graduated from Wenatchee Valley College and in 1968 from Washington State University with a master's degree in economics."

The Oregonian article stated, "In 1971 James joined Trans Pacific Financial Corp. (later merged with First Farwest Financial) and in 1974 acquired with other company executives the firm's national division which became the antecedent to James-Furman & Co. and parent of Greenbrier Leasing. James was born in rural Eastern Washington, grew up on the Colville Indian Reservation, was a Golden Gloves boxer, obtained a high school equivalency degree while in the service during the Korean War and graduated from the University of Washington with a bachelor's degree in 1957."

In 1979 Furman and James managed Greenbrier for its parent, Commercial Metals Co. of Dallas, Texas, and soon bought the company.

The Greenbrier Companies now consist of Greenbrier Leasing Corporation, Lake Oswego, Oregon, owner-lessor of a fleet of over 2,000 railcars and several thousand truck trailers; Greenbrier Intermodal, Walnut Creek, California, the marketing arm for intermodal railcars (i.e. Twin-Stack, Maxi-Stack etc...); Gunderson Inc.; and Greenbrier Capital Corporation, San Francisco, California, equipment-leasing sponsor and lessor that syndicates and manages capital equipment investments for individuals.

Ward lists key events

Asked what were the key events during his years as President of Gunderson Inc., Bruce replied, "(1) The single most important was the way Bill Furman and I have gotten along together. We have a great amount of respect and trust for each other. (2) The development of the double-stack car was and still is equally important. To retain the leadership in the field we need to keep abreast of the rapid change in technology that will occur. Another thing we are looking to is a comeback in the marine industry. And (3), The luck I had in deciding who to keep and who to let go when we bought the company from FMC."

In March 1985, there were 97 salaried and 15 hourly employees. Bruce said, "Many were very good people, but as a start-up company we could not keep that many. 35 salaried people were terminated. We had to make some tough choices, but the way it worked out is very fortunate, those who have remained are the backbone of our success. Given the opportunity and challenge to do something – many of our people have progressed to more responsible positions in the company."

According to George E. Higgins, Human Resources Manager of Gunderson Inc., employment rose during 1985 to 535. Through 1992, employment steadily increased, except for a lull in 1988, to 1,200.

Ward said the single most important capital expenditure during his presidency was for two 25-foot Pacific Press brakes. They allow Gunderson to form side sills and other parts in one piece without having to weld-splice as they did before the new presses were bought. The new presses were located in American Bridge Co.'s (Division of U. S. Steel Corporation) plant in Pittsburgh. They had been sitting, unused, in that plant because U.S. Steel had decided to close the Division. Bruce sent Val Lesina, Maintenance and Security Manager, and Ed Brumley to Pittsburg to look at them. They came back "with their mouths watering". They were bought for a very favorable price. It took 11 truck loads to bring them to Portland and a 14 foot deep steel and concrete foundation for their base mounts.

In the beginning of Ward's term as co-owner of Gunderson he was faced with the task of keeping the company afloat. During 1985 and 1986 any revenue that was generated was important.

Ward leased the scale building on the former Schnitzer property to Childs Truck Lines for about two years. This brought in revenue of $500 per month. During that same period, a three-bay building, also located on the Schnitzer property, was leased to Gray's Crane Co. This brought in $3,000 per month. From 1985 to the present, Gunderson Inc. had several ship-owning customers for berthage services. According to Doyle R. Thomas, Director Rail Services at Gunderson, customers for berthage have included most major oil companies, ship agents who represent the foreign flag vessels and MARAD. "Our revenues for dock rental have been $12,000 to $18,000 per month depending upon the size of individual vessels. Some vessels were moored there for several months at a time."

Bruce said he also leased another Schnitzer property building to a paper company next door.

Others interested in buying MRED

One other group, Oregon Steel – Gilmore, showed some interest in the buyout but did not enter the final bidding. It was rumored that John E. Carroll, Jr. was another interested in purchasing MRED. In reply to my letter to him seeking clarification, he said, yes, he was interested but declined to provide any details.

Bruce credits Howard D. Werth, MRED Controller, and Don Desimini for their expert aid during the acquisition process and the transition of ownership. S. L. "Steve" Ballo, later Sr. Vice President & Operating Officer of Gunderson Inc., furnished operational data. Werth, who later became Vice President & Controller of Gunderson, did a "fantastic job of financial numbers crunching", according to Bruce. (Desimini was Ward's financial counsel in structuring the offers to FMC. In Gunderson Inc.'s organization chart, he is listed as a member of the Board of Directors and President, Kandel Knitting.)

Ward's history

The Oregonian, March 10, 1985 detailed Bruce's background: "Ward, 54, is a Portland native, but moved to San Francisco at age 3 with his parents. He graduated from the University of California in 1953 and is a 1969 graduate of Stanford University's executive program." Despite Bruce's busy schedule he has taken the extra mile to help someone else. He chaired the program, "Take Stock In America," a payroll savings bond program, was Chairman of United Way in 1973, and from 1969 to 1984 served on the Library Association Board. In 1984, he was President when they dissolved the Association and turned its assets over to Multnomah County. The remainder of Bruce's career has been detailed elsewhere in these writings. (See Chapter 14, Booby Hatch)

Bruce's wife, Joanne, was his companion through his years as Salesman for U. S. Steel Corp., Salesman for Gunderson, then its President. She attended hundreds of luncheons, dinners, and conventions with him when he entertained customers and clients. She was a lovely hostess when she entertained so gracefully in her home. She shared his despair and remorse when he resigned his office as President of MRED; and his misgivings about moving away from their Portland home to Chicago. She was pleased, but probably had mixed emotions, when he resigned his position at FMC to return to Portland to sell steel; then co-found a business to merge corporations; then to sell railcar parts; then finally to serve as Chief Executive Officer of an investment company for only four months. She endured the wrenching and depressing days that went with being the wife of a man, without an office to go to, seeking the highest pinnacle in a giant company – its ownership. She felt the same frustration and disappointment as he did during the on-again off-again negotiations with FMC. All the while, she remained an elegant lady and never lost her engaging smile. I'm sure the relief and joy she felt when Gunderson Inc. was reborn, was ample payment for all of the past pain. She is a main column in Bruce's tower of success.

They have raised three children, Richard, John and Julie. Both Richard and John have worked for Gunderson, Richard at several jobs in the plant, and John in the plant and accounting department. Julie is now Promotions & Communications Manager for Gunderson Inc. and is carrying on the Ward tradition at the company.

One of Julie's first experiences at Gunderson was when she was a flower girl to Mrs. Thomas Crowley, sponsor of Barge 101 launching September 12, 1968. The barge was for United Transportation Co., a subsidiary of Crowley Launch & Tug Co.

Chapter 23

Impact of "Impack" (*)

In October, 1981, John A. Carroll, Jr. addressed the Association of Railroad Editors at their annual conference held in San Diego.

Building cars a cyclical business

He said, "It is nothing new to you that the carbuilding business has historically been a highly cyclical industry –not only in orders but also in deliveries, earnings, and product mix. The confusing thing is that there has been no constancy in the cycles – they differ in frequency, (how often they happen), and amplitude, (how long they last). Right now, the bad news is, we are in one of those down cycles."

This "down-cycle", referred to by Carroll, lasted more than a decade, judging from MRED's drop to 4,801 cars produced in 1980 from 6,027 in 1979 and the further decline, eventually stabilizing at a lower plateau for a number of years. The car-build numbers per year for the ensuing years were as follows: 1,593 in 1981; 25 in 1982 (the lowest year in Gunderson's history); 304 in 1983; 555 in 1984; 1,410 in 1985; 1,790 in 1986; 2,027 in 1987; 1,807 in 1988; 2,305 in 1989; 3,446 in 1990; 3,260 in 1991; 4431 in 1992 and 4645 in 1993.

Car construction changed through the years

Just as the cyclical nature of the business changed the number of cars produced, it brought about change in the kind of cars made. The downcycles forced carbuilders to lower their prices on existing conventional cars or create demand by designing cars with greater carrying capacity. Even the railcar parts suppliers became more competitive and gave birth to weight and maintenance saving devices.

Roller bearings replace the hot box

One example of how parts suppliers affected great change in railcar construction was the tapered roller bearing which replaced the old style babbit journal bearings.

The old style bearings were plain cast bronze or cast solid babbit wear plates ("brasses") that fitted over the axle journals. They were housed in the journal boxes which were an integral part of the side frames (undercarriage castings). A hinged lid on each journal box was opened, the box was packed with cotton wadding around the brasses and the cotton was saturated with oil to lubricate the bearings. When the lubrication gave out, the cotton and oil, being volatile, often became overheated by the friction between the axle journals and the wear plates. This caused a smoking "hot-box". If it was neglected it became a "blazer". If it wasn't spotted by the train crew and corrected soon enough, the axle journal was severely damaged and a derailment occurred. Even costly fires resulted from a "blazer".

The first railcar roller bearing was patented in 1828. A few were installed but they were not readily accepted by the industry. Much later, in 1898, the tapered roller bearing was designed and patented by Henry Timken, but even this design was not widely used until the 1930's when several railroads began equipping whole trains with them. After 1954, their popularity increased rapidly when Timken Roller Bearing Co. introduced a long life, prelubricated, self-contained bearing which was easy to install and economically priced. Its competitors came out with their own versions quickly. Early on, Timken had strong competition from Hyatt Bearing Division of General Motors

Corporation. Brenco Bearing Company built its bearing facility in 1960 and became another strong competitor and reliable supplier. From that time forward the old style bearings were replaced rapidly, and the number of freight car "set-outs" caused by "hot boxes" continued to drop year by year. (See Footnote 1)

Gunderson's first railcars, built for the Union Pacific Railroad between 1960 and 1962, were equipped with tapered roller bearings. I recall that, even in 1960, the bid to Union Pacific included an alternate for the old style, stuffed bearings, as did even later car bids for a time.

MRED introduced several prototypes

Complete new car concepts were plentiful. MRED introduced prototypes of several cars between 1971 and 1982.

On May 5, 1992, Gary S. Kaleta, Vice President, Railcar Engineering, Gunderson Inc. provided some background and follow-up on the several prototypes introduced.

In 1971, a 100-ton all steel covered hopper car, FMLX 45200, was introduced. Kaleta thought the car was designed by Len Kutch, Railcar Engineering Manager in the early 1970's. Kaleta said, "This was the first of many covered hoppers we built. A very successful car. The initial production run was 600 cars for the Burlington Northern, followed by over 7,500 more cars of similar design through the years 1971 to 1981, for various customers. There were various improvements made to the car design throughout the years."

In 1976, a 100-ton prototype high side coal gondola car, FMLX 1776, for rotary dump service was introduced. Kaleta said, "This car was the prototype for our entry into the high-side gondola coal car market for western coal. We later built cars of this design for various utilities. The largest single order was for 726 cars, built in the 1979/1980 time frame for Public Service Co. of Oklahoma. This car was also very successful in terms of performance in service. It is well liked by the customers."

In 1979, MRED built a 105-ton 4,200 cubic foot rotary dump, unit-train coal gondola car with a solid bottom and open top, car No. FMLX 105. Kaleta: "This was our entry into the high capacity, all steel, light weight coal car market. We were competing against the Teoli bath-tub coal car and a higher capacity car was needed. (The Teoli car's bottom section resembled the shape of a bath tub.) We were able to get an order to build 347 cars of this design for Central Power and Light Co., Corpus Cristi, Texas. These cars had a few initial problems in service but have continued to perform well and are still in use today." A unique innovation in the car, which distinguished it from other cars of its type, was its lowered center sill (transition sill) which gave it a lower center of gravity and considerable stability.

This coal car made its first appearance September 15-19, 1979 at the Bi-Annual Railway Supply Association show in Chicago.

In 1980, they built a 100-ton, 2,494 cubic foot capacity, low-side mill gondola car with a solid bottom and open top, for general service, car No. FMLX 4669. Per Kaleta, "This car was designed in response to Trailer Train Corporation's request when they formed Railgon, a subsidiary, aimed at providing a pool for gondola cars, similar to the Railbox boxcar pool. Unfortunately, we got there too late and missed the market for this car. The effort was not a complete waste though, as, in 1989, we built some low-side gondolas for Greenbrier, (Southern Pacific, and later for the Burlington Northern) that incorporated some of this car's features into the later design." Railgon was not a successful venture for Trailer Train (later TTX Company) as they found the demand and utilization levels too low to be profitable and have since sold most of the cars.

In 1981, a 100-ton, 4,750 cubic foot capacity all steel covered hopper car No. FMLX 45201 was built. Kaleta explained, "This was a complete redesign of our basic (original) covered hopper car to develop a more manufacturable car with a lighter weight and a higher capacity. Unfortunately, the market disappeared right after we finished the car and we have not had the opportunity to build a production lot of these cars. We hope to remedy that soon. The car continues in service with Atchison, Topeka & Santa Fe Railroad (ATSF) and we look at it periodically. It has performed well and we look forward to building many cars of this design."

May 24, 1982 MRED introduced car No. FMLX 7500, a 30-ton, 7,500 cubic foot single sheath boxcar, 13'0" inside height. The car temporarily went into service on the Burlington Northern Railroad. Kaleta commented, "This prototype car was developed for bulky light density products such as tissue. Because of an enormous box car surplus that developed at this time the car never caught on and we did not build any production cars. We later donated the car to the National Railway Historical Society. The later high cube boxcars we built were not related to this particular prototype. They were developed independently as a spin-off of our normal boxcar designs."

The five and ten packs

At the start of 1981, MRED began looking at a new design freight car for hauling truck trailers. Originally it was introduced by the ATSF Railroad under the name, "Fuel Foiler". Itel Corporation, a freight car leasing concern, bought the patent for it from Santa Fe. They came to MRED to have it re-designed and built. MRED had an excellent relationship with Itel, having delivered thousands of cars to them since 1978.

The Santa Fe creation was ten cars, called platforms, semi-permanently connected to each other with articulating connectors. These connectors permitted the cars to make the rail curvature requirements and considerably dampened the rocking motions that occur with conventional cars. Disconnecting the ten cars was not necessary, except for repairs or replacement, because the cars were meant to travel together as a unit. This unit became known as the Impack car, an Itel trade-marked name, or "10-Pack". A five platform unit, therefore, was called "5-Pack". Instead of the articulating connectors that held the cars together, standard freight car couplers were applied to the extreme ends of the 10-Packs or 5-Packs, enabling them to be coupled into a train whose cars were all equipped with standard couplers. Itel described their Impack car as an articulated TOFC, (Trailer on Flat Car) type.

Carroll, in his San Diego speech, described the Fuel Foiler as a long articulating car, made up of ten units, each carrying a 40 or 45-foot highway trailer. "Each unit has a skeleton center sill design with a trailer hitch at one end and a trailer wheel platform at the other." This car was the forerunner of several different articulated car styles. A conventional railcar had two sets of four wheel trucks under it, one set under each end. Each truck set contained two axles, four wheels and four roller bearings plus other smaller parts.

A lighter car thus less parts

In a 10-Pack, only the extreme ends of the first and tenth platforms required a set of four wheel trucks. The ends of the eight intermediate platforms of the 10-Pack shared a set of four wheel trucks between them. In other words, each of the intermediate eight platforms required only two axles and four wheels, a reduction of 50% per platform.

Whereas ten conventional cars contained twenty, four wheel trucks, the 10-Pack contained only eleven, a savings of nine! The obvious weight savings and resultant

reduced cost, was ideal for the purpose intended – hauling trailers (and eventually containers). Even when loaded, the platforms did not require the strength and carrying capacity of double trucked railcars that carried heavier loads.

For comparison, the major undercarriage components of ten conventional freight cars, one 10-Pack and one 5-Pack are listed below.

	Ten Conventional	One 10-Pack	One 5-Pack
Axles	40	22	12
Wheels	80	44	24
Roller Bearings	80	44	24
Bearing Adapters	80	44	24
Side Frames	40	22	12
Bolsters	20	11	6

Note the dramatic reduction in parts. Of course, as mentioned above, the capacities of the platforms were much less, as they were more economical for carrying trailers and containers than were conventional freight cars. The fuel and maintenance savings were substantial.

Itel first gave MRED an order for a prototype consisting of just two of the ten platforms in a 10-pack, an end unit and an intermediate unit. These were built and extensively tested. With minor changes, another order for two 10-Packs was delivered in 1982. That same year a 5-Pack, ten 4-Packs and twenty 8-Packs were built, as Itel experimented with the various consists to see which combination was the best. Between 1981 and 1984, 704 platforms in various consists, mostly 5-Packs, were purchased.

By the end of 1984, according to William R. Galbraith, Sr. Vice President of Sales and Marketing for Greenbrier and Gunderson, demand for the Impack's dropped when the new double stack cars were developed. Simultaneously, Itel got into financial difficulty and the design and cars were sold to General Electric Co.

57 varieties

Carroll gave the editors in San Diego a preview of several new car designs that had recently arrived on the scene:

"Fuel Foiler", designed and built by Santa Fe Railroad
"Road Railer", from Bi-Modal Corporation
"4-Runner", acquired by Trailer Train in four versions:
    ACF Industries, "4-Runner"
    Pullman Standard, "Front Runner"
    Whitehead and Kales, "ARC-3"
    Youngstown Steel Door Company's, "Backpacker"
"LoPac 2000", initiated by Budd Company

The Fuel Foiler, RoadRailer, 4-Runner, Front Runner, ARC- 3, Backpacker, and Lo-Pac 2000 were light weight designs addressing the need for lighter weight and easier loading in the transportation of highway trailers and containers. All were essentially platforms.

Carroll said of the RoadRailer, "The most unusual and most promoted design has been available for several years. (They) are combination freight vehicles which can be pulled by highway tractors over highways, or pulled by locomotives in special railroad trains. Each RoadRailer has two sets of running gear: a set of tandem axles with rubber

tires for highway operations and a single axle with steel wheels for rail operations. There are both highway trailer and container versions of the RoadRailer.

Galbraith reported on the progress of these various designs as follows: Thrall Car Co. owns the patent for RoadRailer. It has had very poor acceptability. 4-Runner was scrapped. Whitehead and Kales and its ARC-3 was purchased by Thrall Car and formed the base for their future designs. Backpacker was never developed.

Budd's LoPac 2000 is now Thrall's latest double stack 5-unit car.

Continuing Carroll's coverage of new design cars:

"Glasshopper", from ACF

Carroll said, "The Glasshopper, the first fiberglass, covered hopper car, is larger but lighter than a conventional steel railroad car and able to deliver significantly more payload per fuel dollar."

Algola, Santa Fe's aluminum coal car

The "Algola" coal car, designed by Alusuisse Aluminum Co., was greatly reduced in weight because its body was made of aluminum instead of steel. This resulted in a higher capacity car. Galbraith said that the building rights to the Algola car are now held by Greenbrier Leasing but none have been built. Galbraith said the car was too expensive.

Light Weight Coal Car designed by MRED

Carroll described the MRED light weight coal car as having the lowest center of gravity of any coal gondola in the industry. This car was described by Gary Kaleta earlier in this chapter. He said, "Its low center of gravity, due to a dropped or lowered center sill, enabled the car to be considerably more stable along with its extra carrying capacity."

For other virtues and the photos of these cars, one may read about them in the text of Carroll's address in the *Torch & Stinger*, November, 1981.

Carroll finished his address, "In closing, I would like to refer back for a moment to my remarks about the current conditions of the railcar market. In my view, the equipment which I have discussed will only be fully developed and commercially available when there is a demand for new equipment. The ultimate impetus to that demand is economic activity. We need a strong economy for our industry to prosper and to see these new cars in commercial service."

Enter Twin-Stack®

Against this background by Carroll, the'80's saw some drastic changes in the railroad freight hauling business. Perhaps, due even to the bad economy and the need to save on freight costs and train expenses, these innovations may have received greater impetus than they would have, had there been a great demand for standard railway cars. One such change formed the cornerstone of Gunderson's business from 1985 to the present. In 1984, MRED designed a new "double stack container car", a car of the future!

Greenbrier Leasing Co., seeing the great potential for this car type, came to MRED and ordered a prototype of the new, articulated, five platform car, Twin-Stack. Galbraith said MRED designed this car with the help of Structural Dynamics Research Corp. of Cincinatti, Ohio. Greenbrier currently owns the patent rights for this design.

Carroll, who was running MRED for FMC Corporation before Ward and Furman bought it, was reaching for new ways to improve his company's sales, and secured

FMC's approval and backing to build the prototype in a joint venture with Greenbrier. But Carroll was not around to see the fruition of this wise decision. When MRED changed hands, Carroll was transferred by FMC to a position in Chicago. FMC's rights to Twin-Stack were sold to Ward and Furman with the business. Twin-Stack was the forerunner of a winning line of double stack railcars.

Twin-Stack design came with purchase of MRED

It was an opportune time that the partners decided to buy MRED. A burgeoning market was developing for the double-stacking container railcar and Twin-Stack was well positioned to capitalize on that market in a positive way.

Twin-Stack's five platforms were connected together as a single unit like the Itel Impack (5-Pack). The car was billed on company sales brochures as, "The New Generation Container Car". According to the literature, each of the five platforms could haul two or three freight containers of a variety of sizes, ranging up to 9'6" high and in lengths of 20, 40, 45 and 48 feet. They could be stacked two high on the cars in several different combinations. Yet the overall height of the car was within permissible railroad limitations. These features enabled a 40% improvement over standard trailer-carrying flat cars. Other benefits were: more payload for same train length, reduced switching costs, fewer locomotives required resulting in lower crew costs, reduced car and locomotive maintenance and significant locomotive fuel savings.

They were billed as being simpler, faster and safer to load and unload. They required less track space and fewer cranes. They required a shorter train length which, in turn, improved braking efficiency. Adjustable bulkheads on the end of each platform could be tightened against each end of the containers so they wouldn't shift during transit. This also prevented inadvertent loss or pilferage because the container doors couldn't be opened during transit.

Former MRED president now a competitor

Twin-Stack's competition was a car built by Thrall Car Manufacturing of Chicago Heights, Illinois, for American President Lines. A car for two-high stacking of 20-foot and 40-foot marine containers, it was reputedly not as sturdy as Twin-Stack and hadn't the bulkheads on each end to prevent shifting of containers and pilferage. John E. Carroll, Jr., former Division President of MRED, after a few years with FMC, became president of Thrall and is now a competitor of his former company.

The Twin-Stacks were also capable of hauling container liquid tanks or container bulk tanks. In deadheading (shipping empty), they could carry to their destination collapsible bulkhead containers, allowing a five for one empty return.

Each Twin-Stack platform weighed about 34,000 pounds and had a load capacity of about 100,000 pounds. It was not only lighter because of its need for less undercarriage parts but also because of it light weight construction. Unlike a conventional car, its bottom was not solid plate steel with heavy structural steel underframing. Instead, it consisted of an open lattice-work of floor trusses used for structural integrity, and support and protection for the containers. Its structural steel side sills were "incredibly strong" yet light weight, because a series of intermittent strength rings were integrated into the interior sides of the sills.

A five-platform car measured 265'-1-1/2" overall length.

One five-platform Twin-Stack prototype was built in 1984. 2,950 platforms were eventually built between 1986 and 1988. It wasn't long until Gunderson replaced the Twin-Stack concept with four versions of Maxi-Stack® and by the Husky-Stack®. In

1988, the Maxi-Stack design replaced Twin-Stack as the car of choice in Gunderson's line of platform type cars.

Center partition cars saved Gunderson In 1985

A review of Gunderson's car sales revealed that, for the year 1985, the car that saved Gunderson Inc.'s bacon was the Center Partition car. It was a specially designed, 100-ton bulkhead flat car with a center-line beam. It was for shipping bundled lumber and could be loaded from two sides at the same time. 1,410 were sold! These were followed by 345 in 1986, 846 in 1987, 581 in 1988 and 115 in 1989 for a total of 3,297. No Twin-Stack cars were delivered until 1986.

Gunderson repairs freight cars and becomes a landlord

Other new car concepts appeared on the horizon and Gunderson saw their potential and capitalized on them. But before they did, they were still just "skinning by" so they began repairing railcars of all types. This also helped them to survive economic and industry cycles.

For months, Ward and Furman, the new owners of Gunderson, rented space to a trucking company and a crane company. There were trucks and trailers galore parked along Front Avenue in front of the property that MRED had bought from Schnitzer. This brought in $3,500 per month.

They rented berthage space to several ship-owners alongside their docks and piers that were not being used during a dearth of marine business. Revenues from this were $12,000 to $18,000 per month. Currently, their docks are filled with rentals. All of these rentals helped to pay some of the overhead.

Copper lady assembled for Portland building

True to its historical commitment to civic and community affairs, Gunderson Inc. made room in its Craneway 5 to assemble the statue, "Portlandia", for the Portland building.

Michael Graves, the architect who designed the postmodern Portland building, envisioned a statue as the focal point of the building, and suggested she be a descendent of Lady Commerce, the figure on the Seal of the City of Portland.

The "One Percent for Public Art Program," inaugurated in 1980 by both the City of Portland and Multnomah County, provides that a certain portion of the construction or remodeling budget for public buildings will be spent on art. Since its implementation, this resolution has made it possible for these civic bodies to purchase hundreds of thousands of dollars worth of original works of art, much of it outdoors, to be owned by the public."

In 1981, Portlandia's creator, Raymond Kaskey, a sculptor of Washington D. C., entered and won the design/bid competition, and, in 1982, was commissioned under the one percent program to build the statue. The project budget was $225,000 (1% the cost of the Portland building) of which Kaskey received $198,000. This, plus generous in-kind donations from Gunderson and 14 other companies, and from many private donors, including elementary students from West Tualatin View school, is what paid for Portlandia.

Gunderson Inc. said of the project, "When it became evident that the $198,000 project budget was inadequate to transport the sculpture to Portland, and that sculptor Raymond Kaskey faced financial ruin, Portland citizens and businesses rushed forward to offer their aid."

A Gunderson Inc. news release, October 2, 1985, gave some details of the scope of Kaskey's project:

"Over the last three years, sculptor Raymond Kaskey has enlarged his original 2-foot tall maquette (model) to 9 feet in clay and plaster. Using a photograph and working off the plaster model, he constructed plywood contours, or templates. Then he laboriously hammered 1-1/2 tons of copper sheets over the templates to create Portlandia's upper and lower torsos, legs and arms."

The statue is the second-largest hammered copper sculpture in the country after the Statue of Liberty. She is 36 feet 10 inches high and weighs 6-1/2 tons.

When Kaskey was finished and had all the pieces molded to shape, the 6-1/2 ton goddess was loaded in railcars and shipped "KD" (knocked down or disassembled) to Portland.

The parts of the statue were brought from Baltimore, Maryland to Portland free of charge by the Chessie Systems Railroads, Cleveland, Ohio and the Southern Pacific Transportation Co., San Francisco, California. Southern Pacific's representatives involved with the transportation, phoned William R. Galbraith and said they had six carloads (both box cars and flat cars) of statue parts and when they got in they needed someone to "unload the cars".

When the statue reached Portland, someone with the facilities and know-how had to put it together and deliver it, and that is where Gunderson and others came in to the picture. One thing led to another and it ended up that Gunderson Inc. agreed to help assemble the statue. Galbraith discussed with Bruce Ward and asked him if we could donate some space in which to put the pieces together, "He'll have his own people to do the work, but he'll need the facilities and some incidental help and use of crane service from our own people." Since Marine Craneway 5 was not being used at the time, Ward agreed they could do the work in that location as crane service was available. The statue parts were unloaded at Gunderson August 12, 1985.

Kaskey was given an office at the plant during the assembly period, which was several weeks. He and two of his assistants directed putting the statue together.

During the assembly work, Galbraith's incidental help came to over a thousand man-hours which Gunderson donated to the project. They gave the time of riggers, fitters, welders and a crane operator when they were needed.

Galbraith said, "Our shop guys determined that her interior (framing and bracing) was 'totally inadequate' so it was redesigned to make her structurally sound. Kaskey was very grateful." The interior frame was welded steel.

Kaskey fashioned Portlandia out of very thin copper sheet metal. There were nine pieces which fitted together like a three dimensional jig-saw puzzle. The copper pieces were flimsy and fragile, and they required the greatest of care both before and after the connecting pieces were riveted, hammered and brazed together. (Brazing is another name for welding of copper. It takes a special talent to lay down a welded bead on light copper sheeting without distorting the metal.)

Gunderson's press release continued, "The internal armature or skeleton is an awesome cage of two box trusses and hundreds of welded steel struts on which the skin floats, attached by 600 copper plates which had to be invented by the sculptor. Portlandia's plates secure the skin to the armature and prevent electrolysis, which occurs when steel and copper, rubbing together, create an electric charge and the steel begins to corrode."

When the sculptor's crew and Gunderson's people finished the job of assembling Portlandia's body parts, Gunderson's Clyde Whirley Crane transferred her lovely torso

from Craneway 5 to a 175-foot barge on the Willamette River. During her trip up the river to the seawall at McCall Park, she was escorted by the United States Coast Guard, a flotilla of yachts, fireboats, tugboats and "at least one canoe poled by Mayor Bud Clark". She was then offloaded and trucked by Wilhelm Trucking Co. to the Portland building where she was hoisted to her throne by Campbell Crane Company. Her transportation was quite complex. Many overhead power lines had to be taken down during her move. This took place on Sunday, October 6, 1985.

Of the Portlandia move, the *Portland Guide Book* said, "When this six-ton, hammered copper lady floated up to the city center seawall like Cleopatra on her barge and was trucked to her perch on the Portland Building, thousands of proud residents accompanied her through the city streets."

It was the end of nearly three years' work by Kaskey. Portlandia was officially dedicated October 8, 1985, by Portland Mayor J. E. "Bud" Clark and Metropolitan Arts Commission Chair Dorothy Piacentini.

A plaque in the art gallery on the second floor of the Portland Building glorifies the statue with prosaic vision, "Windblown, goddess-like Portlandia kneels three stories above the Fifth Avenue portal of the post-modern Portland building, her face in repose, her open right hand reaches down in welcome to the passersby. In her left hand she bears a trident, recalling Portland's navigational and commercial heritage. Her voluminous drapery, shaped by ocean winds, evokes, in the words of her creator, Sculptor Raymond Kaskey, 'the meeting of land and sea.'" To the casual viewer, indeed, she does repose in regal splendor, gesturing lovingly to her adoring beholders.

When Kaskey thanked Gunderson for providing the facility, he exclaimed, "When I arrived and saw this ideally equipped facility, I thought I had died and gone to heaven."

Footnotes

(1) Tommy Lee, a buyer of freight car roller bearings at Gunderson Inc., secured this brief history of roller bearings from Don Fitzsimmons, Vice President Sales, Brenco, Inc., a roller bearing manufacturer.

(*) Impack is a trade-marked name.

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Chapter 24

Stacking up

In 1985, Gunderson Inc. came out with a new and interesting product, a center partition car for hauling lumber. Though not a Gunderson original, they improved on its design and function. Sales were good for the car. They sold 3,297 through 1991:

The center partition lumber cars

Center Partition Cars Produced by Gunderson Inc.

Year	Quantity
1985	1,410
1986	345
1987	846
1988	581
1989	115
1990	0
1991	0
Total	3,297

The largest customers for this car were Union Pacific Railroad Company, Trailer Train Corporation, Greenbrier Leasing Co., Chessie Systems, Cascade Warehouse, Mid South, Chrysler Rail and Itel Corporation. Several lumber companies, including Hampton Lumber Co., also bought the car.

Gunderson's brochure said it was a flat car with a vertical partition running down its middle and with bulkheads on each end. The center partition gave extra strength to the car and, with the bulkheads, provided rigid positioning and support for bundles of lumber. The bulkheads also prevented shifting or disarray of the packages even under the harshest of jostling.

Doyle R. Thomas, a long-time purchasing department employee and now Director of Rail Services at Gunderson, provided a layman's description of the car.

The car was easy to load. Each side of the car was equipped with 17 small, Gunderson-made, ratchet winches with steel cables that wrapped up and over the packages of lumber and fastened into a key slot on the top of the center wall. When in place the winch could be turned to tighten the cable securely.

Both sides of the partition tapered inward, toward the center of the car, and there were wedge shaped steel bases on the car deck that tilted the bundles so they leaned against the partitions and shifted the center of gravity toward the center of the car. This prevented the lumber from shifting outboard and, with the cables secured tightly, it was held firmly in place during transit. At destination it was a simple matter to unfasten the cables and unload the lumber. The car sustained substantially less damage to the lumber than conventional lumber cars.

This car came in two lengths, 60 feet 8-1/2 inches between its end bulkheads, and 73 feet between bulkheads. The capacity of the short version was 100 tons and about 93 tons on the longer model. Well over 100,000 board feet of lumber could be shipped on the car,

much more than any other freight-car type. This enabled substantial freight saving for lumber shippers.

A Gunderson press release on January 15, 1988 said, "Many Oregon-based lumber shippers are using the Gunderson car to help keep them competitive in lumber markets nation wide."

The cars were provided with hydraulic cushioning devices on each end behind the couplings to dampen the shock to the cars when they were jostled during switching and transit. The principle was much like gradually braking an automobile from high speed down to a dead stop without experiencing a severe jolt. This prevented jostling of the lumber.

Gunderson wins defense against patent infringement suit

In 1988, Gunderson won a major patent infringement suit brought against them by their competitor, Thrall Car Manufacturing, of Chicago Heights, Illinois. Thrall alleged the center partition car design belonged to them, but a federal court jury found that their patent was not valid. When the trial ended, C. Bruce Ward, Gunderson President and Chief Executive Officer was relieved because the car had been a vital source of livelihood for Gunderson people. It meant $52 million in sales over a two year period, and he said, "To me, this suit unnecessarily put 700 jobs in potential jeopardy."

One customer of 150 of the cars, Wallace H. Bonesteele, owner of Salem, Oregon-based Cascade Warehouse Co., said at the time, "The ability to carry so much lumber with weight up to 100 tons has contributed greatly to the transportation side of our warehousing and shipping business. We chose Gunderson, because their cars have a reputation for superior quality, which we demand in our competitive industry; and we had the benefit of using an Oregon supplier."

Three carlines active in 1986

On October 6, 1986, a Gunderson Inc. press release shows Gunderson as having three car production lines, all being used by Southern Pacific Transportation Co. at the same time. There orders were for 175-Twin-Stack® platforms, 300 center-partition lumber-carrying cars, and refurbishment and conversion of 150 flatcars to lumber flats. Southern Pacific leased these three different cars–the platforms and lumber cars from Trailer Train Company and the remodeled flatcars from Greenbrier Leasing Corporation.

The tabulation of production from 1985 through 1991, which follows later, shows Maxi-Stack® replacing Twin-Stack as the car of choice in platform type cars. But before Maxi-Stack entered the market, Greenbrier Intermodal claimed that, through the combined efforts of Greenbrier and Gunderson Inc., Twin-Stack captured over 50% of the double-stack car market in its first year.

Like Twin-Stack, Maxi-Stack carried a variety of container sizes in two-high configurations.

Greenbrier and Gunderson Inc., in 1988, created Maxi-Stack, the new double stack, five platform railcar for the intermodal industry.

How car concepts are researched before production

Before any new car was brought into being, intensive research into the design of the car was performed. In recent decades, the stresses to be experienced by a car in its operating environment were programmed into a computer to calculate where, in the car, the forces from those stresses would concentrate. When the computer solved the equations fed into it, a color image appeared on the computer screen and showed different

amounts of stress in different locations throughout the structure. This was called a "stress-contour plot". From this report the engineers found out where to beef up the car. A brochure introducing Maxi-Stack shows a color photo of a stress-contour plot and says, "This helps engineers evaluate the design, clearly indicating strengths and weakness for each type of stress the car will undergo in heavy, over-the-road and terminal use." Anyone who has heard the thunder of two long strings of railcars humping into each other, can easily imagine what stresses the cars undergo. This thunder is referred to in the brochure as "full-train load compressive forces".

Maxi-Stack I and II succeed Twin-Stack

As can be seen from the chart that follows, Maxi-Stack rendered Twin-Stack obsolete as none were sold after 1988. William R. "Bill" Galbraith said the principal reason was that Twin-Stack's two bulkheads were too heavy and cut down on the payload the platforms could carry. The bulkheads had been billed as a means to prevent pilferage, but other lighter devices to prevent pilferage became available. In any case, Maxi-Stack does not have bulkheads, and pilferage has not been much of a problem.

Maxi-Stack I® featured 120,000 pounds per platform capacity, 20,000 pounds more than Twin-Stack. *Gunderson News*, June 1989, described the car as a "non-bulkhead flat car which has the capability of carrying 20-foot or 40-foot containers in each well, and any size container from 40-foot to 48-foot on the top level." The term "well" means the recessed space, trough or pocket between the sides and ends of the platforms cars. The lower tier containers sit down in the recessed space or "well".

Also in 1988, Maxi-Stack II® was unveiled. It had a per-platform capacity of 122,000 pounds, an increase of 2,000 pounds over the original Maxi-Stack. The end units of a five platform car carried 20-foot or 40-foot containers in the well and 40-foot, 45-foot or 48-foot containers on the top level. The 48-foot intermediate units held 40-foot, 45-foot and 48-foot containers in the wells and 40-foot, 45-foot, 48-foot or 53-foot containers on top. In addition its versatility permitted it to handle both domestic and international containers. Importantly, at that time, domestic containerization had not fully developed.

Mill gondola cars built for Greenbrier

Only 305 platforms of Maxi-Stack II were sold. Gunderson introduced the model by selling the first 100 to Southern Pacific and 200 to American President Intermodal, via Trailer Train.

(Back in 1980, MRED had built a prototype 100-ton 2,494 cubic foot capacity , solid bottom, open top, low-side mill gondola for general service, car no. FMLX4669. According to Gary S. Kaleta, Vice President Railcar Engineering, the car had been aimed at Trailer Train's gondola car pool, but it arrived on the scene too late and at a time when the market had dried up.)

Two orders for these mill gondola cars were produced. The first in 1989, when 325 65-foot 6-inch long, 3,142 to 3,197 cubic foot capacity cars, were built for Greenbrier Leasing Co. and leased to Southern Pacific Leasing Co. While not the same as the prototype, some of its features were eventually incorporated into these later designs. Among those companies giving the cars heavy usage were Oregon companies, Cascade Steel Rolling Mills of McMinnville and Oregon Steel Rolling Mills of Portland, producers of steel, and Schnitzer Steel Industries, who used the cars to haul scrap steel. Both steel producers bought their scrap from Schnitzer. During a sample car ceremony attended by officers of the two steel companies and Schnitzer, C. Bruce Ward said,

"These cars represent a commitment by Southern Pacific to support the growing steel industry and respond to an industry wide shortage of gondola cars. It is also an excellent example of Oregon businesses serving each other." The second order for mill gondola cars came later, in 1991, when 130 - 66', 3,366 cubic foot capacity cars were sold to Burlington Northern. Gunderson bought Oregon Steel's plate and Cascade's steel rounds, squares and small size flat bars, according to Keith R. Kugel, Gunderson's Purchasing Manager-Steel.

Maxi-Stack III®, A third generation stack car

Also in 1989, Maxi-Stack III, a third generation version, was introduced. It featured platform wells of 48-feet capacity in all units with capacities up to 120,000 pounds each. This improved length accommodated two 20-foot, one 40-foot, one 45-foot or one 48-foot container on the bottom tier while 48 to 53 footers could be stacked on the second level of the platforms.

The car, developed by Gunderson's engineers in response to market demand for more versatility, was introduced at the June 1989 Intermodal Expo held in Atlanta, Georgia.

David DeBoer, Greenbrier's Vice President of Marketing commented on the car. "Maxi-Stack III is significant because it is the only car in production that can carry 20-foot, 24-foot, 40-foot, 45-foot or 48-foot containers in all wells and anything from 40-foot through 53-foot can be loaded on the top level. Because people loading this car don't have to worry about certain wells having specific size limitations, it's a terminal manager's dream stack-car."

11,485 Maxi-Stack III platforms have been sold through the year 1993. It has been, by far, the most popular of the double stack cars produced to date.

According to an *Oregonian* news article on May 19, 1992, one 304-foot Maxi-Stack III string of five platforms sells for "in the neighborhood of $200,000. Each platform can carry two boxes or containers totaling 58 tons."

Greenbrier Leasing looked toward the future when they bought three Maxi-Stack III, five-unit cars with provision for electrification, i.e., with the ability to haul refrigerated containers.

First new box cars since 1980's

Gunderson hadn't built box cars for eight years. The huge box car glut of the 1980's and a recession had stopped the flow of orders and had put many carbuilders out of business. Gunderson made a come-back in 1988 when they were awarded a contract by Montana Rail Link, "a new regional railroad in Montana with trackage over a stretch of 150 miles previously abandoned by Burlington Northern," The order called for 100, 100-ton high cube box cars, 52-feet 8-inches long. These cars were used chiefly by Stone Container Corporation for liner board and Louisiana Pacific for particle board. According to Gunderson's news release, September 27, 1988, Stone was the largest maker of liner board and corrugated containers in the world. Shortly after, in 1988, Burlington Northern ordered 210 more high cube box cars and Greenbrier Leasing bought 40. These were delivered in 1989. The entire run of the 350 cars was essentially the same except those for Montana Rail Link had two 8-foot plug doors and the others had single 12' plug doors. A plug door is a door, that when closed, its outside edge is flush with the rest of the car's outside walls. Burlington Northern bought 120 more of these high cube box cars in 1990 and Greenbrier Leasing ordered 100. Greenbrier's lot were for Stone Container Co. Again, the cars were quite similar except for the door configuration.

Greenbrier Leasing purchased from Gunderson 125 100-ton single sheathed box cars for lease to Champion Paper Co. in 1991. These box cars were standard cars, not high cube like the previous orders.

In any case, box cars for special needs were coming back, and Gunderson was ready to build them.

True to all railcar orders received by Gunderson, every customer wanted something different. In June 1989, a Santa Fe Contract for 500 Maxi-Stack platform units was specially configured to give different loading capacities that the railroad wanted. This car was billed as Maxi-Stack II-1/2®, a fourth generation version of double stack technology in platform cars.

Husky Stack®, fifth generation stack car arrives

The fifth generation double stack car was introduced in 1991 – Husky-Stack. According to the March 1991 issue of *Gunderson News*, orders for 150 of the cars were received from Trailer Train Company and another 106 from Burlington Northern Railroad. Greenbrier/Gunderson said the car was developed in response to shippers who were looking for "heftier" cars to haul containers such as garbage and rolls of paper.

Gunderson News said, Husky-Stack is ideally suited for the new emerging market of hauling solid waste by container. "Sixty-two of the Husky-Stack cars that Trailer Train is buying will be leased to Union Pacific Railroad for hauling containers of garbage from Seattle, through the Columbia River Gorge, to Arlington, Oregon, for disposal. Others will be leased to Burlington Northern to haul large rolls of paper."

"Beyond its ability to haul more weight, the Husky-Stack is smaller. Today, so-called 'unit trains' holding containers of goods crisscross the nation daily. Most of the cars Gunderson and others make are permanently linked in units of five, ideal for long-distance hauling.

"Dave DeBoer, Vice President of Greenbrier Intermodal says the next wave of container growth will be with domestic traffic. 'Shippers will load containers not just for export, but for delivery to the next state. That will take single cars able to handle two containers at a time, not in units of 10 or 20.'

"'There are these unit trains leaving Los Angeles for Chicago nearly every hour of every day,' said DeBoer, 'but for domestic business, railroads are going to need a car to serve Fresno and Battle Creek. This new Husky-Stack is the car to do that.'"

During 1990, Trailer Train worked closely with Gunderson in testing the car through its prototype and trial stages.

The Husky-Stack version came either as a "stand alone" (single car) or in the slackless draw bar versions. ("Slackless draw bar versions" means: several cars semi-permanently hooked together in a manner similar to the articulated 5-packs that have been described in previous pages. For example all of the Trailer Train (TTX) cars came in single, stand alone units, whereas Burlington Northern received not only stand-alone units but a series of 3-packs.)

Later, in April 1991, L. Clark Wood, Gunderson's President announced that Gunderson received an additional order from Trailer Train for 700 stack-cars: 500 Maxi-Stack III articulated cars and 200 Husky-Stack stand alone cars. He was very pleased to receive that order, "considering there aren't a lot of orders in the industry being placed right now. Most important to everyone involved is that it means Gunderson will have a full shop for the summer."

As it worked out, when the year 1991 was over, Gunderson had produced 635 Husky-Stack platforms: 375 for Trailer Train Company, 110 for Burlington Northern and 150 for

Norfolk & Southern Railway Company. Of Burlington Northern's total, there were 31 three-platform packs. All the rest were stand-alone versions.

Among the advantages listed in car's advertising brochure, and not mentioned above, are: "Husky-Stack provides a means to extend double-stack economics to smaller, mechanized terminals, including plant-site terminals. It requires only two boxes to a destination instead of ten. There is no need to mix and match light loads with heavy loads. This saves terminal time, insuring on-time train departure. Husky-Stack can handle excess-weight international containers. This advanced capability opens new markets for heavier domestic commodities, such as lumber, paper and canned goods."

The brochure showed that two 20-foot, one 40-foot or one 48-foot container may be placed in the lower tier and two 28-foot, one 48-foot or 53-foot containers may be loaded on the top tier of Husky-Stack. Needless to say, other combinations that do not exceed the limits can be used.

Capacity of the 71-foot 7-1/4-inch car was 166,000 pounds.

An article in *The Oregonian*, Tuesday, May 19, 1992, said, "'The Husky-Stack lists for somewhat over $40,000,' according to Gunderson spokesman, Bruce Harmon." That amount is for the single version, not a string of five.

Gunderson's history of stack cars

Ms. Lois Emery, Contract and Billing Coordinator for Gunderson Inc.'s Finance Department, provided a history of stack cars sold through the end of 1993. It's shown below:

Year	Twin-Stack	Maxi-Stack	Husky-Stack
1981-1984	5		
1985	0		
1986	1,445		
1987	1,180		
1988	325	590	
1989		1,775	
1990		2,745	
1991		2,020	635
1992		3,545	755
1993		3,085	636
Totals	2,955	13,760	2,026

® means "Registered"

"If you can't fight them, join them"

Not willing to allow others to capitalize on foreign made products, Bruce Ward felt, "If you can't fight them, join them". This was the case with Hyundai, a South Korean carbuilder who built 200 single platform intermodal flat cars for Trailer Train Co. during 1986 and 1987.

Ward went to South Korea, contacted Hyundai, and secured the job of completing their cars at Gunderson Inc. It was a minor job but it helped keep the shop busy and paid "handsomely", according to Doyle Thomas, Director, Rail Services at Gunderson Inc.

The bodies of the cars were quite complete on arrival at Gunderson. All that was involved was welding a trailer hitch on the car's deck, assembling the car's trucks,

finishing up the piping, hooking up the air brakes, touching up the paint and stenciling on some car information. It helped Hyundai because the car was delivered in the United States by a "certified carbuilder". They may have saved some freight costs by having the cars assembled in the U.S.A.

The spine cars

Then in 1988, Hyundai engaged Gunderson to assemble ten articulated five-platform, single level container flat cars, a Trailer Train design known as "Spine Car". The car was capable of carrying one 40-foot, 45-foot or 48-foot container on any of its platforms, and the first, third and fifth units could carry two 20-foot containers in place of one long container.

This led to orders from Trailer Train in 1990 and 1991 for 125 TTX all-purpose five-unit articulated Spine cars. These cars were built from a Gunderson design. Each of the five-carbody units was equipped to carry one highway trailer 28-foot through 48-foot long or one 40-foot, 45-foot, or 48-foot container. The first and fifth units had the additional capability of carrying two 20-foot containers in place of one long container.

The overall total length of the five units in each Spine car was over 264 feet. Each unit was equipped with a retractable trailer hitch which was lowered to flush with the car deck when containers were used instead of trailers. It was interesting to note that the trailer hitches for these cars were bought from a competitor, Trinity Industries of Dallas, Texas.

The Spine car derived its name from its narrow center sill (like the human spine or back bone, only straighter) which, in effect, is its body. There is no deck as in conventional freight cars. There are outboard platforms to support the four corners of the containers and the wheels of the trailers. The first and fifth units have additional points of support for 20-foot containers when they are used.

These Spine cars were not too profitable for Gunderson because, being a relatively new type car, it took some rapid tooling up for the limited quantity; and the price at which the job was taken was too low.

A photo caption of the Spine cars in the January 1991 issue of *Gunderson News* describes the car as follows: "Like Maxi-Stacks, Spine cars are also five-unit articulated cars. However, they differ from Maxi-Stack cars by being single level and capable of carrying either intermodal highway trailers or most sizes of containers." "Intermodal" means the ability to carry freight by two or more modes be they rail, truck, barge or even airplane.

The cryogenic box cars

In 1987 and 1988, still further strides in new shipping concepts were made by Gunderson with the cryogenic box cars which they built for Cryo Trans, a Maryland concern; and J. R. Simplot, the potato marketer in Idaho. After two prototypes were built, J. R. Simplot bought 100, Cryo Trans bought 120 and General American Transportation Co. bought 81. These purchases occurred between 1988 and 1991.

These car were delivered only in a semi-finished condition by Gunderson. They were configured like a steel sheathed box car but had a false ceiling in their top and a wooden interior lining with space left for insulation. The cars, in this condition, were then delivered to one of two insulating firms including Mel's Cargo, owned and operated by Mel McCracken, a long term Gunderson supplier, who foam-insulated them to make them virtually air tight, like a refrigerator. The false ceiling, called a "bunker", was blown full of dry carbon dioxide (dry ice). Over a period of two or three weeks the dry ice

converted itself into a freezing gas. The gas filtered down into the cars and refrigerated them. Their cargo of frozen french fries, potato products or other perishables was thus protected during the transit period.

Gunderson didn't build these cars from the ground up. They modified used box cars, suitable for the purpose intended.

Riding the "Reefer"

Formerly, refrigerated cars were kept cold by diesel engine-driven air compressors and heat exchangers. Before about 1940, prior to the diesel-driven freezers, the "reefers", as they were called, had two heavily insulated ice bunkers or compartments, one in each end of the car. There were two, thick refrigerator door lids on the top of each bunker. The doors were propped open to receive huge blocks of ice that were lowered with ice tongs down into the bunkers. I am very familiar with these ice bunkers. In October 1934, a friend and I "hopped" a freight train coming down off the Sierra-Nevada Mountains from Truckee to Roseville, California. Our train "compartment" was the ice bunker of an empty "reefer". We propped up the ice door on top of the car for our air supply. It was fortunate that, during the rough, cold ride, no one decided to lower blocks of ice into the compartment or to close and lock the doors.

This new method of refrigerating a freight car may prove to be much more economical than the diesel, motorized refrigeration system still being used in perishable food cars to protect frozen foods during their delivery.

By the end of 1991 the Cryogenic box car sold over 300 units, including 151 to Simplot, 70 to Cryo Trans and 81 to General American Transportation Company.

Gunderson's carbuilding history

By the end of 1991 Gunderson, Inc. and its ancestor companies had delivered 67,810 cars of various kinds during their carbuilding history. Broken down into twelve groups, they are listed in quantity rank:

Box	34,630
Maxi-Stack	7,130
Covered Hopper	6,874
Wood Chip	3,702
Center Partition	3,297
Coal	3,174
Twin-Stack	2,955
Flat	2,810
Other	819
Impack	704
Husky-Stack	635
Spine	625
Mill Gondola	455
Total	67,810

"Others" included such cars as two scale test cars for the State of Washington and 21 "Dynabulk" cars for hauling flour and cement.

The Dynabulk cars, built between 1965 and 1969, were unsuccessful. They were tank cars that contained two air bags in each car, one bag on each end. When the air bags were

inflated, one at a time, the flour or cement powder was pushed by the inflated bag toward the unloading gate in the center of the car. A big difficulty with the car was keeping the bags in place.

The "Gunderson Background", published in a news release on November 8, 1991 gave a short history of the company from its founding in 1919. The release contained some interesting facts about the 65,000 cars Gunderson built since becoming a car builder in 1960. (The number 65,000 doesn't agree with the 67,810 shown in the table above, which is the exact number produced according to Lois Emery who has kept track of car shipments for many years. The background was probably computed much earlier than the end of 1991. The facts were:

* If coupled together on a single track, all the cars built by Gunderson would stretch from Portland to Monterey, California
* 4.9 million tons of cargo capacity
* 28,675 miles of welding rod around the world 1-1/16 times
* 3.5 million gallons of paint
* 3.45 million tons of steel
* Over 1/2 million wheels, weighing about 900 pounds each

The background sheet said the company was the only railroad freight car builder west of the Rocky Mountains. It was the fifth largest manufacturing employer in Portland.

Gunderson rebuilds and repairs freight cars

Since 1984, Gunderson was busy performing conversion, refurbishing and repairs of used freight cars. So busy in fact, that in October 1988, the Greenbrier Companies saw fit to let a contract with one of Gunderson Inc.'s competitors for a $1.3 million upgrade of 115 woodchip gondola cars which they leased to Georgia Pacific Corporation. The cars were rehabilitated in early 1989. Greenbrier President and Chief Executive Officer, William A Furman said, "This repair contract is an important part of our overall program of providing good, serviceable equipment to our customers. We wanted to keep as much of our repair business in Oregon as possible. With the Gunderson shops already full with repair work, we needed to find a competent shop to handle the work within the required time frame."

Barge building had come to a halt by the end of 1984. During 1985, Gunderson did have about 20 barge repair jobs, mostly for Crowley Maritime. But even barge repair tapered off to zero.

Although there has been no marine business, their facilities were used at least for berthage of various ships, some for considerable lengths of time. This has brought in good revenue. They have rented cranes, marine lights and blowers to other marine yards in Portland.

During 1986, Gunderson secured jobs to repair or modify almost 200 railcars of various types. During 1987, the number jumped to well over 500 and has remained close to that level through 1991. In recent years they have evolved into a "custom" repair shop. Individual cars come in with their defects listed on a defect card in a receptacle on the side of the car. Then the cars are repaired according to the defect card and sent on their way. Some are cars that have been in train wrecks. Southern Pacific, Burlington Northern, Trailer Train, Santa Fe, Seal Land Services, Union Pacific and several others have become good customers in this line of work.

They have repainted and restenciled freight cars. In February 1986, according to Doyle Thomas, Director of Rail Services, they even painted three passenger cars for Walt Disney productions. The cars were used in a movie. Thomas said, "We were desperate and would do anything to bring in some business."

Recycling used freight car parts

Since 1986, Gunderson has up-graded its railcar wheel and axle shop, not only to increase new production but for demounting of used freight car wheels from axles to recycle them for reuse. The wheels are re-turned and trued up to standards. The axles are also reconditioned as good as new. This has provided a good deal of revenue to the company.

Another source of revenue is the recycling of second-hand freight car trucks. They are performing dozens of truck change-outs on an on-going basis.

Then they have developed a good parts business. They have paid attention to what parts are being ordered and in what quantity. If they move fast enough, they're making the parts for stock and immediate delivery.

What made Gunderson's shops so full of work, in good part, was its and Greenbrier's increased interest in upgrading used freight cars to the latest railroad standards, making them almost as good as new, yet at substantially less cost. Railroads and major shippers were slimming down their car fleets and reducing capital expenditures due to a severe lack of freight hauling business. They found it more economical to purchase or lease the cheaper cars than to buy new ones unless there was a compelling need for a new car for a specific purpose.

One of the first orders for railcar upgrade was the conversion of 150 flatcars to lumber flats which took place in late 1986. These cars were being rebuilt on one of Gunderson's three car production lines. The other two included a 175-platform order of Twin-Stack double stack container cars and 300 center-partition lumber- carrying cars. (already previously mentioned) All three orders were for Southern Pacific Transportation Company. When announcing this contract, C. Bruce Ward, President and Chief Executive officer of Gunderson Inc. thanked Southern Pacific, "It was SP that helped get us into the railcar business in the late fifties and early sixties, and this summer the new Gunderson has had three production lines turning out three different car types for Southern Pacific. We couldn't be happier having Southern Pacific as such an important customer to us."

5,000th freight car finished by the new Gunderson

On August 14, 1987, a Gunderson press release announced the completion of the 5,000th railcar produced since the company was formed, February 28, 1985, "Senator Bob Packwood christened the car with a bottle of champagne after the car rolled off Gunderson's production line. The milestone freight car was a Twin-Stack intermodal railcar built for Sea-Land, Gunderson's biggest customer for that car-type."

But 460 of those 5,000 cars were refurbished cars. President C. Bruce Ward said, "We started this company 2-1/2 years ago in a severely depressed railcar market. And though the market has improved only moderately, we have done exceptionally well." Furman and Ward had found a way to overcome the dearth of new car orders, fix up the old ones and find users for them.

Hog cars for Farmer John's sausage

A good example of this philosophy was represented in the conversion of 90 box cars to three-level hog cars, that Gunderson completed for Clougherty Packing Company in

May 1989. The Los Angeles packing concern used the cars for its "Farmer John's Sausage" hogs traveling from the Midwest to Los Angeles for slaughter. Two extra decks were added to the boxcars. The sides of the cars consisted of louvers that could be opened and closed for ventilation. Each of the car's three decks was equipped with a watering trough. The hog train could be stopped every few hours to refill the troughs with water so the 312 thirsty hogs could drink. A photo of the car, shown in the June 1989 issue of *Gunderson News* shows car number "HOGX16" stenciled on its side. The car's doors were installed at one end of the car, not in the middle like they are on conventional cars.

The Oregonian, February 19, 1989 carried a story on Gunderson's activities in which C. Bruce Ward was quoted concerning several aspects of the firm's business lines. The article said: "Gunderson also has become active in rail-car repair in the past year, although that still accounts for less than 10 percent of the company's sales, Ward said. It could grow, though, to 15 percent to 20 percent of all business, as railroads are delving deeper into their old surplus equipment and finding that much of it needs repair. Ward noted that only in the past couple of years has demand for conventional cars – flatcars, boxcars, grain cars and gondola cars – picked up enough to warrant use of older equipment."

Southern Pacific joins Greenbrier in 9,000 car rebuild venture

Their foresight paid off handsomely in March 1991, when Southern Pacific and the Greenbrier Companies entered into a joint venture for a newly established "Golden West Service" fleet. The deal called for Greenbrier to buy 9,000 "dilapidated" railcars from Southern Pacific. The fleet consisted of boxcars, covered hopper cars, open-top hoppers, gondolas for steel and wood chips, mechanical refrigerator cars and flat cars. Gunderson repaired them at a price between $5,000 to $15,000 per car. The Greenbrier Companies then leased the refurbished cars back to Southern Pacific for use by its transcontinental shippers.

On October 22, 1991, a Gunderson News Release publicized a reception honoring Southern Pacific and its Vice Chairman, Mr. William Holtman. The occasion observed the 1,500th of a 9,000 freight car refurbishing program. About 150 shippers from the Pacific Northwest were invited to the program. They inspected the eleven different types of rebuilt cars which were on display. Holtman christened a representative car.

In addressing the group, William A. Furman, President and Chief Executive Officer of The Greenbrier Companies, said "This $150 million program means steady employment for about 250 workers at Gunderson and other car shops in Oregon and around the country. It also means Greenbrier and Gunderson are involved in providing a new fleet of high quality rail equipment which will serve important shippers throughout the Northwest and elsewhere."

Belated press releases lift salemen's hopes

It's amusing to recall the many occasions in early Gunderson and MRED carbuilding history when publicity of Southern Pacific Co. orders was not released until late in the programs or even when the orders were nearly completed. In the above case it was relatively early, the 1,500th car of a 9,000 car program. The announcements, no doubt, were released at a precise strategic moment.

In the past, when these belated or delayed public relation affairs took place after the orders were well under way, when the news hit the streets, salesmen from all over the country would besiege the Gunderson purchasing and sales department by phone and in

person hoping to land a big order, but their spirits were dumped when they were told, "The purchasing is completed, in fact, the cars are very nearly done."

Industrial recycling means jobs for Gunderson

On October 24, 1991, a news reporter covering the event, Eric R. Herst, of the *Daily Journal of Commerce* of Portland, wrote a column entitled "'Industrial Recycling' Means Jobs For Gunderson." It contained some clear and insightful comments by Bruce Harmon, Greenbrier/Gunderson's Director of Communications. He said:

"These cars were headed to the scrap heap, but someone at Greenbrier saw an opportunity and came up with the idea to refurbish these cars to standards for new cars set up by the American Association of Railroads.

"Southern Pacific doesn't spend the money to refurbish and they are a virtually new 9,000-car fleet that is blue and not rusty to attract new customers." (The cars were painted blue, not the time-worn red that is on most Southern Pacific cars.)

Herst quoted Gunderson President L. Clark Wood who said, "We, along with SP personnel, selected the cars that have a big usage requirement. We are looking for a similar contract with other railroads." They also picked out the best, most structurally sound cars, the ones which needed the least amount of work to upgrade.

Herst also interviewed John Burnside, Director of Equipment Programs for Southern Pacific. Burnside estimated that the program of refurbishment added another 10 years to the life of the railcars and that the money was well spent.

Portland Mayor Bud Clark lauds Greenbrier-Gunderson

At the reception, Bud Clark, Mayor of Portland gave a brief talk. It's quoted here because it contains some nice compliments to Greenbrier/Gunderson and Southern Pacific, and a little background on Gunderson's past. It's also included because it's a good example of Clark's unusual speaking style. Note that, in referring to Gunderson Inc., he uses the term, "Gunderson Brothers", in the context of a company that has never changed hands.

"Thank you, I want to make this short, also I want to give credit where it's due. I have been watching Gunderson Brothers since I was a little kid in the Second World War when they were launching landing craft and then they launched many other things including Portlandia which was part of their civic pride, and now this partnership with Southern Pacific and the Golden West project is just fantastic. That commitment to quality and long term commitment and the spirit that they've created with the employees. The diversity of the employees creates that good quality product but what hasn't been mentioned a lot, that I see and what I've seen in Bill Furman and Bruce Ward and the entire leadership of Gunderson Brothers, first of all bringing it back to being an Oregon company, but its the imagination and the leadership in creating business, making things come together so that we do business in this city of Portland. So that we do business in this United States of America. That's something that is going to make or break this nation.

"I've just come back from the Far East and you see how things are bubbling there and you want to see that American spirit of enterprise work, and Gunderson Brothers is making it work Bill Furman. It's just a great pride. I see that Golden West on there (The name letters stenciled on the cars) and know that it's a partnership between Southern Pacific, Gunderson and Greenbrier, and that creativity of leadership, that imagination, is happening right here in Portland, Oregon with certain individuals. We need more of that

leadership and I want to commend you again for creating that spirit, that truly American spirit, here in Portland, Oregon, U.S.A.

"Congratulations and thank you from all the citizens of Portland, Oregon."

It is also noted here that Thomas Crowley, Chairman and Chief Executive Officer of Crowley Maritime Corporation, who spoke at several MRED launchings of barges for his various companies, never used the names, "MRED" or "FMC", but always referred to them as "Gunderson Brothers".

— Gunderson Charts Its New Course —

Chapter 25

William R. Galbraith, salesman for the hungry giant

William R. "Bill" Galbraith, formerly Vice President Sales of Marine and Railway Equipment Division, and his department were responsible for the sale of over 50,000 railcars, almost 200 barges, ships and boats totaling 170,000 tons, and thousands of tons of special fabricated steel parts totaling 200,000 tons for Gunderson.

His sales know-how and leadership have been of incalculable benefit to company growth.

Galbraith came to Gunderson in October, 1966. Robert E. Gunderson hired him as a salesman in the Chicago office, where he stayed until January 1, 1967. At that time he transferred to the Front Avenue plant in Portland as Sales Manager. In 1970 he was promoted to Vice President of Sales.

Bill told me that George Wagner, a former associate of his who was a metallurgist at U.S. Steel in Portland, assisted in recruiting Bill to Gunderson. When George heard that Bobby Gunderson wanted Bruce Ward to go from sales into shop management for a time, George recommended Bill to Gunderson.

From steel to paper to steel again

Formerly, from 1964 until 1966, he was National Sales Account Manager for the Kraft Paper Division of Boise Cascade Corporation in its Chicago office. Prior to that, between 1953 and 1964, he was a salesman with the United States Steel Corporation, where he served in the Columbia-Geneva Division in its Seattle office. He also worked in San Francisco, Los Angeles and Denver for U. S. Steel.

In July 1986, Galbraith was named to head the Greenbrier Companies' newly formed railcar marketing and leasing group. He assumed the title of Senior Vice President of Sales and Marketing.

Since 1985 and the formation of Gunderson Inc., Greenbrier marketed all Gunderson products including the new Twin-Stack, Maxi-Stack and Husky-Stack container cars as well as other new concept cars and conventional freight cars.

In his new job, his marketing group became responsible for the sales of all railcar types built by Gunderson plus the two companies' railcar refurbishment and leasing programs. After this advancement he moved his office from the Gunderson plant to the Greenbrier headquarters in Lake Oswego, Oregon.

Galbraith has flown more than 8 million miles to and from the railroad and barge capitals in the United States–more than 30 times around the world–bringing the business back to Gunderson in his sales book.

He has developed long-standing friendships with scores of his customers' engineering, purchasing, sales and traffic representatives. They respect him. Their loyalty to him is a company asset.

Galbraith reviews Gunderson's growth

Asked what he viewed as the most important innovations in Gunderson's growth, he gave the following reply:

"I guess I would have to answer this by saying that one of the most important things we did at Gunderson was to design and build our own boxcar ends, because, as you know, over time everybody copied our design, and yet when it was first produced, the carbuilders thought it was something pretty weird and that it would never last. I would probably rank that as number one.

"Probably number two would be when we became a fully integrated car builder and were able to build our own sides, ends and total underframes and lay the plant out accordingly so that we could build competitively. I don't know if you would call that an innovation but it certainly was a necessary move in the right direction on our part to get production up and costs down. (Author's note: Gunderson's first railcar underframes were made– as a directive of the customer–with huge, heavy steel end castings that were joined together by fabricated structural steel. When Gunderson finally got permission to substitute fabricated steel for the cast end sections it reduced the weight and cost per car very substantially, and made Gunderson a fully integrated and more competitive carbuilder.)

"We became known in the industry as the quality builder, and the way we built our cars and the acceptability in the trade made everyone watch us closely, and in a lot of cases, copy us.

"We then went into building our own covered hopper cars and our design was not an industry standard. It resulted in a very significant number of cars being built, peaking in about 1980 when we built 2,700 covered hopper cars in one year, on top of about 1,600 boxes. (Box cars) In 1981, we built around 1,250 covered hopper cars.

"I think that the most significant plant refinement was when (no question about it) we straightened out the track at the end of the paint building and put in a new paint facility and a transfer table. That 90-foot transfer table seemed to give us the opportunity to move fairly smoothly in a production flow and increased our ability to efficiently move and produce cars. Prior to that time there was a real bottle-neck where we were always working against ourselves, having to back cars out of the plant and then back in again. (See Footnote 1)

"Perhaps we got sophisticated with putting in floors in cars when we built the deck press. (See Footnote 2) Since we didn't have a car turner, this was a significant improvement in getting nailable steel floors into the cars and welded to the underframe. And, of course, nailable steel floors replaced the wooden floors, and Joe Huserik's 'Conga line' disappeared when we did steel floors. (See Footnote 3)

The new blaster and dryer (paint system) got to be a significant improvement in getting production up and cost down."

The insatiable sales group and the hungry giant

The sales department fed the "Hungry Giant" according to Galbraith, featured in the January 1979 issue of the *Torch & Stinger*. The "Hungry Giant" was Gunderson's plant.

Bill and his group began the selling process with persistent sales calls upon prospective customers. Leaving no stone unturned, they contacted the engineering, executive, mechanical, purchasing and marketing departments, sniffing out the persons who could make or share in buying decisions. Then they wined and dined the decision makers. Brochures, drawings, photos and technical data were given to the prospective buyers.

The payoff came when the customer saw fit to inquire for a price and delivery, be it for railcars, barges or other Gunderson products. Often the delivery date was specified and had to be met if a bid was to be successful. When Bill's sales group received an

inquiry which outlined the exact customer requirements, they analyzed it to determine if the product fit Gunderson's capabilities. Other departments were asked if the product could be made and delivered on time. If the indications were positive then Galbraith advised the customer of his intention to submit a bid. If not, he expressed his regrets and asked to be included in the next inquiry.

The bidding team

The bidding process began with an "Inquiry Route Sheet", which was sent to production for a man-hours estimate, to engineering for design and a bill of material, to purchasing for pricing and availability of the materials, and to scheduling to block out the necessary time in the line to build the product. There was a strict deadline for bid completion. Often the bid date was only a few days away when the inquiry was received so everyone involved was "up against the gun" to get his or her part of the work done.

When the bid was sent to the customer, Gunderson often had the low bid but still wasn't awarded the job. Many factors favored the competition such as: proximity to supply and/or the customer's point of delivery (freight costs), better delivery dates, design advantages and past business relationships. Quality was of paramount importance. It often offset or defeated a lower priced bid.

In its early carbuilding years Gunderson had no reputation in the field. It took years to build one up but when it did, Gunderson quality was in demand.

The inbound freight report

The railroads jealously guarded their freight revenues, reserving in their inquiries and orders the right to route over their rail lines all inbound materials to the carbuilder. Even if materials originated on the tracks of one of their competitors, our railroad customer kept the right to specify the routing.

This idea of reserving the right to route inbound freight soon proved to be a boon to Gunderson. Portland, Oregon was a long haul from Illinois, Ohio and Pennsylvania, home bases of most of the suppliers who sold freight car parts such as axles, bearings, brake equipment, freight car trucks, steel items and wheels. These few items comprised the heaviest part of the railroad cars.

On nearly every bid, Galbraith furnished his prospective customer an "Inbound Freight Report", prepared by purchasing. It listed all of the parts of the car by carset weight, their source and source city, freight rate and cost of inbound freight per carset.

The carset freight cost was substantial and aroused the customer's traffic department in a big way. Even if our bid was higher than competition, the railroad saw the inbound freight revenue and calculated its "real" purchase price based on extra carloads in a train coming westbound in any case. It often swung the bid Gunderson's way.

The "Exhibit A"

In their inquiries the railroads often listed the cars' main parts and requested that our cost of each item be priced. This bid addendum was titled, "Exhibit A" Specialty List. Concurrently with the inquiry to us, the railroad would seek the same parts prices directly from the vendors. By the time they received the carbuilders' bids, they could compare the parts prices they received with those in the carbuilder's "Exhibit A" and find any discrepancy in supply pricing.

If their parts price was lower than that shown by the builder, they would request a deduct in the price of the car to compensate for the difference and require the supplier to sell Gunderson at the lower price. My buyers and I were irate with the supplier when this

situation occurred because it showed that the suppliers were not consistent in their pricing policies. In future bidding, the supplier was brought into line.

The marine side of business

The marine business was simpler to bid than railcar work, although the material requirements varied considerably from job to job. Gunderson had more control over the materials it used. The customer left it up to Gunderson to specify and secure the correct material, except when they wanted to furnish some of their own equipment or when they wanted a specific kind engine, pump, etc.

Once a marine order was completed and shipped, Gunderson would frequently be required to furnish spare parts, instruction manuals, plans and specifications. If there was a warranty problem in the field, the company shouldered its obligation and paid for the repairs elsewhere in other yards.

Though Galbraith was not too involved in the "how" of building barges and ships, he had a keen sense of Marine & Rail's limitations and possibilities. When the order for the six Chevron tankers was received, he argued that, instead of performing the outfitting of the tankers in our own yard, we ought to have sublet that work to yards who were much more experienced in outfitting than MRED. He was over-ruled. In retrospect, it's possible that in so doing we may have cut sharply our losses on the job. He sold several bare ship hulls to other yards in the area who completed their own outfitting. Outfitting included installing all of the living and operating quarters, machinery, piping, electrical and electronic systems.

Payment for the work

The money for the jobs came in promptly for the most part. Payment for marine work was based on a percentage down with the order, progress payments based on certain stages of completion and a final payment on delivery. In freight car sales, each car was invoiced the day it was shipped and the railroad usually grouped cars and paid the bill in 30 days or less. This contrasted with former days when, during a bridge or building construction project, the money was sometimes tied up for months before it was all received.

Galbraith's assistants

Galbraith had many able assistants throughout the years. A few of them come to mind and exemplify the type of talent with which Galbraith surrounded himself.

Robert "Bob" Johnson and Roy Hodges were in charge of certain railroad accounts. Johnson had served 25 years with Burlington Northern Railroad in marketing and sales before joining Gunderson. Hodges had 20 years in sales and marketing with FMC's various divisions. He began his experience with FMC as a pilot in the Air Transportation Department.

William R. Tagmyer came on board in about February of 1969 as Assistant Manger of Sales. Like Bruce Ward and Galbraith, Tagmyer was a U.S. Steel Corp. alumni. When Ward and Galbraith recruited Tagmyer, he had been a steel salesman in Denver, Colorado between 1961 and 1965. Before his Denver stint, he had worked on the steel desk at U.S. Steel in Portland. As such, he was well acquainted with MRED and its various activities. He and his wife, June, were anxious to get back to Portland. His first duty at MRED was in general sales for both rail and marine work. He brought in a substantial amount of marine fabrication business, such as ship's hatches, from our marine competitors,

National Steel & Pipe, San Diego, California, Willamette Iron & Steel Corp., Portland, and Todd Shipbuilding Corp. of Seattle, Washington.

One interesting memory of Tagmyer's sales experience was when, for some reason, both Bruce Ward and Bill Galbraith were absent from the office at the same time. Tagmyer fielded an inquiry from Burlington Northern Railroad for 100 Wood Chip Cars which they needed in a hurry. He and Len Kutch, Rail Car Engineer, processed the inquiry and submitted the bid within hours. They enlisted the cooperation of all MRED departments; we were all hungry for business and the two promised delivery of the cars in 30 days. The job was delivered on time. We had a happy customer. Ward and Galbraith did some sweating for a few weeks.

When MRED landed the big Chevron tanker program, Tagmyer was appointed Contract Administrator and Project Manager for the program.

In July, 1975, Tagmyer later left Gunderson to join Northwest Pipe & Casing Company, a Portland steel pipe manufacturer. He became its President and Chief Executive Officer and remains so at the time of this writing.

When Tagmyer left, Dan Rogers, with a background of 23 years of marine experience, took charge of marine sales, also reporting to Galbraith.

In January, 1979, Pat O'Connell assisted Galbraith in sales by handling railcar parts sales. O'Connell left MRED to go into his own, downtown Portland business, selling various art objects.

Galbraith ranks as his biggest customer, Trailer Train Company, (Now TTX Company) of Chicago Illinois. In November 1991, he booked the largest order in Gunderson's carbuilding history from Trailer Train. The order was worth $65 million and called for 1,625 Maxi-Stack III platforms or 325 five-unit double-stack cars.

Despite his extensive traveling and his busy career, Galbraith has made time to serve his community in various activities. He was president of the Easter Seal Society and has served on the board of directors of other local charities such as United Way, Boy Scouts and Waverly Children's Home. He was elected 1985 Chairman of the Railway Progress Institute, Washington, D. C., a trade association for the railway supply industry. He has served as President of Portland Golf Club and University Club.

Bill's wife, Kathy, has no title with the company, but, truly, she is one of Bill's finest sales assistants. She has spent thousands of hours attending business dinners, conventions, launchings, luncheons and receptions. She has flown at least a million or more of those miles with Bill. She has hosted the wives of company and customer executives making them acquainted and feeling comfortable wherever they are. Her smile, her cheerful conversation and genuine interest in everyone and everything makes one feel important, a part of the bigger picture.

Yes indeed, much of the growth of the Gunderson companies is a result of Bill Galbraith's patient and persistent pursuit of sales, and his incredible care for customer satisfaction.

His wealth of knowledge of the company's past was of great benefit to me in preparing this history, he is its history.

Footnotes

(1) The 90 foot transfer table was a rail shed on wheels. It rolled sideways. It received cars from one set of carbuilding tracks, moved sideways and shunted the cars back up the line on a different set of tracks.

(2) The deck press was a hydraulic device that held the steel box car flooring solidly in place on the underframe and maintained the desirable dimensional tolerance while the

floor was being welded to the underframe. After the welds were completed the car was within tolerance.

(3) The phrase, "Joe Huserik's 'Conga Line,'" originated from a photo of Joe and several of his crew, 6 to 8 men, all lined up, one behind the other inside a box car, jumping on the floor to get the last plank to spring into place so it could be clipped to the floor stringers.

Chapter 26

Looking ahead

Ward turns helm over to Furman

C. Bruce Ward ended his term as president and chief executive officer at Gunderson Inc. January 1, 1990. He remains with the company as chairman of the board of directors.

Ward culminated a presidency that spanned almost ten years when Gunderson was a division of FMC Corporation, then between 1985 and 1990, he, with the aid of his associates and co-owners, William Furman and Alan James, nurtured Gunderson from its precipitous brush with extinction, and left to his successors a dynamic company that had vast potential for growth. He presided over the construction of over 8,000 railcars with a value of almost $400 million.

In the early days of the new company, Ward kept it alive by leasing to trucking and crane companies parts of its large facilities, and by renting its docks for mooring space to ship owners. When new railcar orders did not come in quickly, he obtained orders to repair and refurbish old railcars. This business became an on-going money-maker though it accounted for less than 10% of the company's sales.

A news release on December 19, 1989, announcing Ward's change in positions, said that William A. Furman would replace Ward as president and chief executive officer.

Furman praises Gunderson and Greenbrier as survivors

Furman was quoted, "Gunderson and Greenbrier have managed to survive in an industry plagued by nationwide over-capacity and scarce freight car orders. This circumstance continues today with the remaining car builders, competing harshly in a market which utilizes only 50% of the national car building capacity. Yet, from 1985, our partnership has manufactured and sold more than 8,000 railcars, worth almost $400 million. If made into a single train, these cars would stretch from Portland past the Dalles."

The release added, "Gunderson has impacted the local economy with their success since 1985. It has purchased approximately 182,000 tons of steel, 80% of which was made in Oregon. Gunderson has also paid over $54 million in salaries and wages to its employees."

When Gunderson Inc. was formed in 1985, it borrowed $10 million from Oregon's public employee pension fund to buy the company from FMC Corporation. "That loan is due to be repaid in a year," Ward told the *Sunday Oregonian*, February 19, 1989. He said he expected that at that time the loan would be refinanced through conventional sources, such as a bank, or be extended with the state.

Ward divesting his shares in Gunderson

Ward told *The Oregonian* he was selling his shares in Gunderson. The article said, "He is following a five-year plan, which will liquidate his holdings by the end of 1991. He said he did not intend to retire completely, but, noting he was 58 years old, said he did intend to reduce his time commitment to the company."

Ward also stated in the article that he saw "signs of a potential new demand for barges which, years ago, also were built at the Gunderson plant. 'We're talking to a couple of people about barge deals.'"

Furman appoints Wood president of Gunderson Inc.

In September, 1990 L. Clark Wood became the president of Gunderson Inc. replacing William Furman who had held the position since C. Bruce Ward retired from active management of the company. Furman continued as Chief Executive Officer and Ward remained Chairman Of The Board.

Wood graduated in mechanical engineering from the University of Texas. For five years prior to his coming to Gunderson he served as general manager of the freight car division of Trinity Industries, the nation's largest freight car builder located in Dallas, Texas. His career at Trinity spanned 21 years, during which he oversaw plant production through various levels of management from the first level on up.

In announcing Wood's appointment, according to *Gunderson News*, (January, 1991), Furman stated that Wood had an excellent knowledge base, and the experience needed to run Gunderson effectively. Wood's new responsibilities, in addition to those as president of Gunderson, included participation in the senior management team at Greenbrier and the strategic direction of railcar repair and manufacturing for the Greenbrier Companies.

Wood's Formula for success

A letter from Wood to his fellow employees appeared in the same issue of *Gunderson News* and I am quoting its entirety because it reflects Wood's knowledge of running a carbuilding plant and shows why Trinity Industries was so outstanding under his leadership. In his letter, Wood laid down a very precise formula for success in railcar manufacture. Wood said:

"Though I've only been here a short time, all the excellent things I had heard about Gunderson people have been confirmed by your performance and the cars going out the door. I commend you on the fine reputation that you have established as a 'quality manufacturer' of railcars.

"Our ability to keep our plant operating at its full potential depends on our maintaining this strong commitment to quality, and in addition, to broaden and balance our product line by establishing a competitive advantage for all cars we build.

"We are leaders in the double-stack car market for several reasons: Manufacturing quality, design superiority, service reliability, delivery reliability, and price competitiveness. We must establish these leadership qualities for all products we manufacture.

"As the new year begins I would like to talk about our objectives for 1991. Our course is really very simple. Continue to build the double-stack cars that meet or exceed our customers' requirements and keep our number one position in the stack car market. Concentrate on getting orders for existing conventional car designs, i.e., box cars, mill gondolas, center partition cars and spine cars to keep Line 2 full. Look to the future by developing new designs for coal cars, which were an important part of our business in the late 70's and early 80's.

"Unfortunately, our customers demand not only quality, but price competitiveness too. Our price competitiveness depends on how efficiently we manufacture our cars. That means we need to continue to do the things we do right; doing our jobs right the first time. We must track down the sources of rework and eliminate them. Rework can make us non-competitive and cost us our jobs.

"We can turn some of this competitive pressure to our advantage by doing things better than our competitors. Here are some ways we can do this: First, keep our customers satisfied - meet their requirements and do it on time. Second, keep pricing pressure on our competitors

by being the best at designing and building double-stack cars and other conventional cars. Here are some of the ways:

- Continuing to reduce our labor hours with every order.
- Purchase our materials at the lowest costs possible.
- Refine our engineering designs to simplify manufacturing and improve reliability.
- Involve employees at all levels in improving the work process. We want you to continue to come up with ways to improve the way you do your job.

"Over the next few months I will be coming into the shop to visit as many of you as I can. I hope to learn from you ways we can strive to keep our competitive edge where we have it and improve where we need to.

"This has been a good year for us. As a result, we have been able to share with you a bonus pool totaling $1.9 million dollars. Let's all resolve to do our part to make this possible next year.

"I hope you are having a relaxing holiday season"

The letter was signed, "Clark".

After Wood's introduction at an employee meeting, Furman made a forecast which reflected his keen sense for the future. It is also quoted:

Furman outlines future

"Bill Furman continued the meeting by taking a look at the current economic situation. He pointed out that the United States may be heading for a recession, and Oregon in particular could be hit hard with local factors like unemployment and the spotted owl/timber controversy. He went on to explain what it could mean to companies like Gunderson and Greenbrier. Because of the situation in the Middle East, banks are being much more conservative in their financing. This could be a problem, as we need financing for our equipment. However he added, if we were to avoid a war and come up with a quick outcome in the Middle East, companies like Gunderson could survive a recession. Furman noted that other factors look better: Repair and refurbishment are still in business and doing quite well, and he feels we could survive on that alone if needed by putting new car lines into the repair/refurbishment and maintenance business.

"Intermodal also looks positive. Based on the history of the last two recessions, intermodal freight grows while other freight falls off. And, of course the fuel policies and problems stemming from the Middle East favor rail over trucks because of rail's fuel efficiency.

"Furman closed the meeting by telling employees that this is just the beginning of a whole series of changes, including: the new wage package, the new benefit program and the newly structured bonus. 'I want these changes to reward our employees for their commitment to Gunderson and the quality work they produce.'"

Going into 1990 Gunderson's three car lines were all busy. Line 1 was booked through late June, 1990 building Maxi-Stack II's for Santa Fe and Maxi-Stack III's for Trailer Train, Southern Pacific and Interdom. Line 2 was booked through early June, 1990 building Maxi-Stack I's for Trailer Train, Maersk and Greenbrier. The Refurbishment line was booked through mid-March, 1990, performing 200 mechanical rebuilds, changing doors from double plug to single sliding for Greenbrier on cars to be leased to Canadian National Railroad.

The new Gunderson's first five years

On March 1, 1990, Gunderson Inc. observed its first five years as the new Gunderson. All employees were treated to a catered breakfast while Gunderson leaders addressed them, "sharing stories about how the business began, and to thank them for their diligence and the consistent hard work they provide."

To commemorate the milestone, each employee received a quartz alarm clock that had a train of Gunderson-built railcars printed on its face, along with an automobile license plate frame bearing the words, "My other car is a Maxi-Stack." Gunderson also presented its employees who had been with them for the full five years, a five-year anniversary jacket and an Oregon III book, autographed by Gunderson's founders Bruce Ward and Bill Furman.

Topping off the day, the crowd of 800 was given the rest of the day off, with pay. As *Gunderson News* commented, "It was a day to celebrate – not only being in business for five years in an industry that wasn't expected to succeed. But for having loyal, skilled employees who have taken Gunderson beyond survival and into success."

Resisting the "turnpike doubles" and "triples"

In early 1991, According to *Gunderson News*, the railway supply industry and several major railroads joined with several citizen, environmental and safety groups in an effort to convince Congress to freeze weight and length limits of trucks and trailers rolling over the nation's highways. Thousands of letters from company executives and employees coupled with television and newspaper advertising, particularly by CRASH (Citizens for Reliable and Safe Highways), convinced Congress to respond with the freeze. The coalition scored a decisive victory. HR 2950, the Intermodal Surface Transportation Efficiency Act of 1991, was signed into law by President Bush on December 18, 1991. Although the House and Senate versions differed somewhat, operations of long combination vehicles were frozen nationwide.

The main objects of bill's limits were the "turnpike doubles", or "Rocky Mountain doubles", trucks and trailers which have an overall length of 120 feet; and "triples", semi-trailer trucks with bodies towing two trailers with bodies, having an overall length of 110 feet. As a group they're referred to as, long combination vehicles, (LCV's).

The trucking industry wanted to increase weight limits from 80,000 pound to 135,000 pounds. This would free the industry to operate longer LCV's such as twin 48-foot trucks and trailers and triple 28-foot trailers towed by a single truck. Such an increase would add 37% to the present productivity for the trucking companies. The obvious result would be detrimental to the railroad industry, depriving them of an estimated 52% reduction in net operating revenues, according to an article by Gus Welty, "The Myth of Monster Trucks", in *Railway Age* magazine, August 1990.

Then in 1992, Gunderson and its Oregon supporters fought to ban triple trailers in the State of Oregon. A majority of votes for Measure 4 would have done so. But in this instance, Gunderson was unsuccessful. The majority of Oregon's voters rejected the measure.

Railroading the "triples"

In 1989, already being aware of how this type of competition affected their business, and from a different perspective, the Greenbrier Companies had already undertook a partial solution to the LCV problem. In a move to compete with and to reduce the number of triple trailers using Oregon highways, The Greenbrier Companies and Superior Transportation Systems (STS) on May 22, 1989, entered into a joint venture–a new service of hauling triple 28.5-foot, 14-foot high semi-vans on special railcars between Portland and Los Angeles.

While triple trailers are legal in Oregon they are not legal on California's highways. The new service is known as Triple Trax intermodal railroad service. Gunderson was involved in retrofitting the cars for the triple trailers. Superior Transportation Systems, Inc. is a full service transportation brokerage company based in Wilsonville, Oregon with five additional operations in California and Kentucky. They provide diverse services including Truckload, Less than Truckload, Intermodal Rail flatcar, boxcar, warehousing and local distribution. William A. Furman said, "We think it has potential to be an important transportation niche between Portland and Los Angeles."

TTX wins conditional five year anti-trust immunity

After being opposed by Gunderson Inc. when they supported a legal challenge to anti-trust immunity for Trailer Train Co. (TTX), Raymond C. Burton Jr., President and Chief Executive Officer of TTX, proved in April 1991 that he harbored no ill will. He awarded Gunderson a substantial order for 700 double-stack platforms consisting of 500 Maxi-Stack III articulated cars and 200 stand-alone Husky-Stack cars. The order assured Gunderson that it would have a full shop for the summer.

Trailer Train (TTX), the nation's largest pooler of railcars, originally formed in 1956, and jointly owned by 19 of the nation's major railroads, bought and provided a national pool of freight cars that were readily interchanged, loaded and unloaded throughout the U. S. railway system. By 1987 it employed 12,000 and had $582 million in revenue. By December, 1991, it owned and maintained 100,000 intermodal platforms and expected 1991 revenue of about $625 million. Its ownership had changed from 19 to 16 of the nation's principal railroads.

Trailer Train Co. previously had petitioned the Interstate Commerce Commission (ICC) for a 15-year renewal of antitrust immunity which they received in 1974. The Justice Department, in November 1987, had petitioned the ICC to open proceedings on ownership reapportionment at Trailer Train. They had also questioned whether Trailer Train Co. possessed possible monopolistic or anti-competitive buying power (technically called monopsony), an antitrust term describing situations where a buyer has monopoly-like control over sellers. Justice approached Gunderson and Greenbrier for their support. At first they were reluctant to tackle their best customer but then decided to go ahead on the perilous course.

In February 1989, when the ICC handed down its ruling, it did extend antitrust exemption, but only for five years, not the 15 asked for. But ICC also limited Trailer Train's antitrust exemption to purchases made for its car pool, but would not allow it to purchase cars for assignment or allocation to specific railroads, which was Gunderson's main objection. As explained in *The Oregonian* February 18, 1989 announcing the ICC's decision, Gunderson objected to "Trailer Train's practice of buying cars and assigning them exclusively to individual railroads which amounted to a leasing operation not envisioned in the original exemption. (Assignment was the power to buy cars for use by individual railroads) Since Trailer Train controlled 80% of the market for container flatcars and for automotive flatcars, they claimed, it was able to dominate manufacturers and prevent new leasing companies from entering the business."

Ward, Furman and other company executives were satisfied with the ruling although they felt they didn't get all they asked for. The case generated more than 20,000 pages of documents and lasted 15 months.

TTX gives Gunderson its biggest car order

Still later on, Burton proved once again that he and his company bore no grudges against Gunderson after they participated in the anti-trust immunity suit. In November, 1991, he visited Gunderson with three things in mind:

The first was to purchase 1,625 platforms of Maxi-Stack III railcars valued at $65 million. It was the largest freight car order ever received by Gunderson since it became a car builder in 1960. Gunderson President L. Clark Wood said that the order for the platforms assured that 1,000 plus employees would be very busy through much of 1992.

Gunderson Honored for quality

The second purpose of his visit was to notify Gunderson and Greenbrier employees that they had come out "Number One" in a recent TTX Quality Evaluation of major car builders. The "TTX Quality Audit" is based as follows;

10% Financial and administrative aspects
15% General overall service the car builder offers
20% Delivery and timeliness and the ability to meet TTX needs and deadlines
25% Original cost of the car including maintenance.
30% Quality and performance.
100%

The third purpose of his visit was his announcement that TTX had awarded Gunderson an "A" rating in their "Alpha Factor" review, a rating based on a car builder's subjective elements.

Gunderson News carried Burton's comments. "Quality,' Burton said, "is the reason Gunderson has received TTX orders. This recent order is based on the strength of your performance." He explained that Gunderson's success in quality assessment is because of many things. "You have an excellent plant here," he said, "you have good focus on management and you utilize your resources" He added that there was a good work ethic here in the Northwest with people dedicated to doing their jobs. "Your engineers are outstanding," he commented. "They excel in railcar design for today's needs, and are ready to handle what the future may demand. The workers out on the line really deserve a lot of credit. Gunderson workers take the craftsman approach, making your car building process dependent upon experience and care. That kind of approach delivers a quality railcar. Gunderson and Greenbrier work because of the quality people who work here. We at TTX look forward to doing more business with you in the future."

With TTX's award, Gunderson has received the highest acclaim from most of its customers in both of its major product lines, rail and marine. Thomas L. Crowley, Chairman and President of Crowley Launch & Tug, had already praised the shipyard when LA REINA was launched March 23, 1978 for his Trailer Marine Transport Division. I repeat his words saluting MRED, "There is pride in their workmanship. I wish we had it in San Francisco. About 15 major jobs have been done in Portland, including the NEPTUNE, a beautiful job and the best finished tug we ever got, and now the LA REINA the world's largest ro-ro barge." And, of course, during World War II, it will be remembered, Gunderson's granddaddy received the highest honor from the United States Army and Navy, the Army-Navy "E" award for excellence, and from the United States Maritime Commission, the Maritime "M" pennant, also for excellence.

Gunderson may return to shipbuilding

The Oregonian newspaper, on April 30, 1992, announced, "Gunderson Examines Return To Barge, Ship Building." In the article, Wood was quoted as saying, "The timing may be right to get back into the shipbuilding business on expectations that demand will increase for double-hulled vessels as a result of the Oil Pollution Act of 1990."

The Gunderson shipbuilding facility has a capacity for launching ships up to 700 feet long.

The ways have been idle since about 1985 and, even then, only incidental repair work to marine vessels was performed. The last complete barge, built for Sause Bros. Ocean Towing Company, was the 273.5 foot PEPEEKO. She was delivered November 20, 1984.

Nucleus for marine work in place

Wood told *The Oregonian* that Gunderson would initially make barges, and could expand to shipbuilding later. It still employs several people who were the nucleus of the former marine division.

Two veteran marine engineers are on tap whenever the marine department resumes activity. They are Terry Halpin, Marine Engineering Manager and Don L. Kiive, Senior Equipment Designer. Though little or no marine work has taken place since 1985, their talents have been pointed in other directions, including the designing of auto racks which are frames to hold automobiles when they are shipped in intermodal containers.

Looking ahead to re-entering the marine business in a big way, Gunderson produced a new marine brochure in December 1991. Its title is "Our Ways To Serve You Better".

The marine capabilities summary in the brochure lists Gunderson's major facilities. They are:

Yard Description:

- 75 acres
- 750,000 square feet under cover
- 700 x 110 foot side-launch ways (largest on U. S. West Coast)
- Covered blast and paint facility
- 1100 foot outfitting dock with 30 foot water depth

Crane Service:

- 100 ton capacity Clyde whirley crane with 25 ton whip
  - 185 foot maximum boom reach
  - 50 feet high at deck
  - 200 tons capacity at 60 foot minimum reach
- 20 overhead cranes in plant ranging from 15 to 40 ton capacity
- Marine assembly bay cranes are 40 ton capacity

Plate fabricating

- 50-foot long, 2000 ton press brake
- Plate Rollers - up to 3 inch plate thickness capacity
- Plate shears, press brakes, NC punches and presses

Burning capacity:

- Five major burning machines, including three CM-100 NC burning tables - two have plasma torches and one is gas torch equipped.

The brochure shows various photos of past jobs: the 650' Chevron oil tankers; Morrison-Knudsen's 420' by 98' heavy construction barge, the BETTY L; the Chevron Tankers; and Crowley Maritime Service's Triple Deck Roll-on Roll-off (Ro-Ro's). Then there are some superb aerial photos of Gunderson's facilities. It is indeed an impressive shipyard but for the present time, it's a sleeping giant.

While Gunderson Inc. has grown since its acquisition by Ward and Furman, so has it's new parent, The Greenbrier Companies. Various news releases give clues to that growth. On March 10, 1985, *The Sunday Oregonian* announced the purchase of MRED., and said of Greenbrier, "The Greenbrier fleet totals nearly 2,000 intermodal and perhaps 500 other cars....." On August 14, 1987, a Gunderson press release said their fleet was 10,000. Usually, at the end of a Gunderson press release, a brief sketch of the company was given. A typical description, like the one dated November 8, 1991, said, "Greenbrier is active in railcar marketing and leasing, leasing intermodal highway trailers, and syndicating and managing equipment-leasing investment programs. It owns or managers a fleet of over 30,000 railcars and intermodal trailers." The fleet had risen from 2,000 in 1985 to 30,000 in 1991.

Chapter 27

Movers and Shakers

Throughout this history I've tried to weave all of the departments of the company into the fabric that is Gunderson. Some of them like the loft and the machine shop, were featured in other chapters. I hope when I'm done with this last chapter, all of the departments will have been asked to take a bow. Oh yes, a few of the movers and shakers will be mentioned at random.

Growth of Front Avenue plant

First it might be well to point out the evolution of the physical size of the 4700 NW Front Avenue plant so that one can visualize company growth and the eventual vast area over which machines and material were stored and moved and where the Gunderson people worked.

Date	Total Acreage	Acreage Under Cover
July 3, 1945	10.6	2.21
Circa 1947	10.6	2.5
July 17, 1956	40.	14.
November 1, 1966	51.	14.
November 8, 1982	95*	Unknown
November 19, 1991	75	17.22

*Before sale of property to Shaver Transportation Co.

Before the Front Avenue plant was built, the Linnton Plant, Gunderson's first manufacturing plant, which was used in the late 1939's and early 1940's, was 1.65 acres in size with .43 acre under cover.

Burners, shear operators and brake pressmen

In a plant like Gunderson, its main commodity is steel. But in order to use the steel it has to be cut to shape, the same as cloth does when making clothing.

For relatively straight runs, steel plate can be sheared, but for complex shapes and bends and for the thicker sections, the steel must be burnt.

Steel plates up to nine inches in thickness have been burnt by Gunderson workmen. Ken Pugh, a burner, was featured in the March, 1977 *Torch & Stinger*. A photo showed Pugh breaking loose a giant hinge for a dump barge. The nine-inch thick hinges were burned from high strength steel plate by a CM-100 numerically controlled burning machine. According to Pugh, "The CM-100 burned all the hinges easily, making a precise cut, 'smooth as a baby's bottom.'" The company had three of these machines in 1992.

Archie crews – plate shop foreman

Archie Crews was plate shop foreman when he retired after 36-1/2 years on December 29, 1978. On July 14, 1942, he began his career with Gunderson on the swing shift, earning $1.12 per hour. After a period of war service, he returned as a loftsman, anglesmith, pressman, and finally plate shop foreman.

Testimonials from Archie's friends and fellow employees went like this:

"There's no way to estimate the number of tons of steel you have put through in the number of years you've been with our operations," said Virgil Hatfield, Railcar Operations Manager.

"I don't think there's anybody here that's put in as many free hours as Archie," said Tom Lorence, foreman, plate shop. "He was always in at 5:00 AM"

According to Al Tekorius, plate shop supervisor, "Archie was one of the best people in laying out plate. We're going to miss him."

The art of burning steel goes back a long time at Gunderson.

The March 15, 1945 issue of the *Gunderson Gunner* takes note of a pipe splitter:

"One more example of the ingenuity of Gunderson craftsmen came to light this week as (this) machine went into production. Called a pipe burner, the machine is capable of splitting a 12-inch steel pipe into three sections each 22 feet long, all in one operation." The machine, developed in cooperation with engineers of the Linde Air Products Corporation, used three standard burning torches mounted on a track which ran the entire length of the pipe. The resulting thirds were used as steel fenders for the YF barges and for YTL harbor tugs.

"It was pointed out that the new device saves as much as 75% of the time required for the operation by hand methods. It increased the accuracy with which the pipe may be split and reduced warpage to a minimum." John Navarra, was the Gunderson burner who operated the machine.

Many thousands of feet of pipe have been slit since then, not only for boat fenders, but for dozens of other purposes as well.

The 1992 Gunderson now features high speed automatic plasma burning equipment capable of cutting steel plate at up to 120 inches per minute with precise edge conditions which make for better welds. They've come a long way since the Linnton plant days when their only burning machine was an Airco model No. 4 Acetyline Camograph cutting machine with a 48-inch by 82-inch work table. The torch took several minutes to traverse the table's width. They also had three hand operated, Oxweld acetylene cutting and welding outfits with gauges, torches and hose. They could burn through plate with these. There was a six-inch stroke Peerless Hack Saw machine which was used to saw angles, rounds and squares to length.

The plate shop is where the flat pieces of steel called, "plate", "sheet", and "strip" are sheared and formed to make the myriads of sides, bottoms, tops and brackets in between, for the bodies of barges and railcars. In addition to the flat steel, there are dozens of varieties and sizes of mill-rolled shapes called, "angles", "I-beams", "pipe", "rounds", "squares", "tubing", "wide-flange beams" and on and on. All of these shapes must be sheared or burned to length then beveled, coped, notched, formed, and on and on. The job of buying all of this steel rests with Keith Kugel, Purchasing Manager, Steel for Gunderson, Inc. He collected all of these types from bills of material issued by engineering, grouped them into the best price bracket and scheduled them to arrive just in time, not too early. It is amazing that he kept track of it all and kept the plant supplied with the food of its business. I don't think there is any finer steel buyer anywhere, than Kugel.

Chet Gunderson recognized right off, when he opened the Linnton plant for manufacture of tanks and logging trailers, that he needed machinery to cut and form steel in his "plate shop". (He called it a "machine shop")

Major machinery at the Linnton plant was:

One - Dreis & Krump Press Brake (1/4 inch capacity by 12 feet long)	$ 4,730
One - Seivert Flanging Machine, type (Used to bend the edge of plates to form a flange on tank heads for each end of a tank)	2250
One - Marshaltown Throatless Shear	425
One - Fairbanks-Morse Air Compressor	900
One - Lodge & Davis Drill Press	450
One - Sidney 21" Lathe – 12-foot bed	1,800
One - #1812 Cincinnati All Steel Shear (1/4 inch capacity by 12 feet long)	3,891
One - Set Bending Rolls, Kenton Machine Works	3,250
Total	$15,696

The total value of equipment in Chet's machine shop was $38,000.

The press brake, flanging machine, the two shears and the bending rolls were the machines in the plate shop. The drill press and lathe were in the machine shop. These machines were "horse and buggy" compared to today's "Rolls-Royces". The capacities have increased many-fold since the Linnton days.

In July 1941, the equipment and machinery was valued at $49,000, new replacement value.

The 1964 corporate appraisal for equipment and machinery was almost $3 million new replacement value.

Currently, Gunderson's equipment and machinery value, though unavailable, is several times the 1964 value. The 1964 listing is in two books thicker than a Sear's catalogue!

For a comparison of then to now, the latest press brake acquired was reported by *Gunderson News* in March 1992. It was installed in the North end of Bay 3. It is a 1,200 ton capacity, Pacific hydraulic press brake. It is capable of forming up to one-inch thick plates by 20 feet long. It can also form thinner plates up to 60 feet long! It replaced a 400 ton Cincinnati mechanical brake. I wonder if the Cincinnati was the first brake ever bought for Front Avenue?

At least one plate shop foreman at the Linnton plant comes to mind, Bud Meyer. A later Front Avenue plate shop foremen, Dorman Jackson, who hired on as a welder at the Linnton plant in 1942, probably remembers those machines and what a variety of shapes came off them. He transferred to the Front Avenue plant when Linnton was closed. He was plate shop and burning alley superintendent in 1969 when he retired, for medical reasons,

When George Taylor, who worked in the plate shop, retired after 34 years, he recalled when he came to work on September 21, 1942 at 95 cents an hour, "There was only one building, a fence around the place, and clear space to the river. (The 4700 building) There were even a couple of houseboats tied up at the place."

I have lost track of the intervening plate shop and burning alley foremen, but today's manager is D. W. McCormick. Under his guidance, the present superintendents of fabrication, small parts, burning operations and plate shop are M. K. "Mike" Shunn, C. L. "Chet" Krushel, T. P. Lorence and S. W. Davis, respectively. They oversee the processing of many thousands of tons of steel each year.

One of the first big plate shears used at the Front Avenue plant was a Cincinnati. the *Gunner*, May 6, 1943, reported, "Said to be the largest power shear on the Pacific Coast, this new Cincinnati giant is delivered to Front Avenue plant. Here Gunderson men tussle with the big baby as they slide her off a flat car. Weighing 59,000 pounds, the new shear was no cinch to handle. The big sheer, capable of handling three-eighths inch mild steel up to 16 feet in widths, will greatly speed metal forming at Front Avenue." Louis "Babe" Dillman was its operator, aided by Elmer Harman.

Equipment operators

This group includes the crane operators, fork lift drivers, riggers and truck drivers. The riggers have been covered in a different chapter.

Whether the steel was in its raw state, semi-fabricated or ready to go to the customer, a conveyance was needed to haul the material in a safe and efficient manner. That's where the drivers came in. They were skilled in maneuvering their vehicles in and out of tight spaces, knew how to handle a loaded rig and delivered their load, intact and safely, to its final destination.

Some of Gunderson's moving methods were unusual. The *Gunner*, in June, 1953, cartooned an LCM (Tank Lighter) as being moved on a roller skate.

"In the long, noisy assembly bay, partially completed hulls in various stages of work are lined up stem to stern. Mounted on low, heavy-duty trucks, the LCM's are a cinch to move as each one reaches what GeeBee men call, 'the last mile' just before launching.

"With motive power furnished by a Hyster mobile crane, the LCM's are rolling in a steady stream these days but the exact rate of production is a carefully guarded Navy secret. It's no secret, though, that the 'LCM's Go Like Hell." That slogan was coined by James Childs, Plant Superintendent, at the beginning of that LCM program.

The conveyances were cranes, trucks, pick-ups, Cushman "golf carts", or lift trucks and all required drivers.

The crane operators sat high overhead in their cabs awaiting the next move of a structure. When signaled, they used the exact amount of pressure on their operating levers so that the load would be picked up and moved smoothly. Two of the crane operators were, Leo Sherman (retired September 4, 1974 after ten years), and Nelson Milloy (retired July 8, 1977 from the swing shift). He retired to his unusual business of raising worms and raising chickens for their fertile eggs. He said, "If things get too tough and I get hungry, I'll eat eggs and fried worms." Carl Folmsbee, chief overhead crane operator who retired May 18, 1990 after 16 years, was known for his resolve and tough sheen. Bill "climbed out of his crane for the last time" on April 17, 1992 after serving Gunderson for 18 years. He was a crane operator in the Side Building and Crane way 2. There is a separate chapter on the granddaddy of crane operators, Percy Wood. Percy gives an interesting view point from his seat at the crane controls.

One of the first yard cranes was a crude, home made truck rig called a "Cherry Picker". This was an odd looking truck with a fabricated steel boom tied into its front end. The boom had pulleys on it through which a heavy wire cable was threaded. One end of the cable was connected to a truck winch. The other end had a steel hook on it. The boom itself could also be raised and lowered to suit the load. Heavy steel sections were bolted to the back end of the truck to counter the weight lifted by the truck's boom. The rig could lift up to five tons. It moved like a snail.

A collective sigh of relief took place when the first Hyster "Karry Krane" was bought to replace the "Cherry Picker". It was the first of dozens of Hyster cranes and lift trucks that moved material from here to there in the plant.

On October 21, 1943, the *Gunner* reported that the Hysters were being equipped with "one-man tops" in preparation for winter. Carl Soles, a driver, demonstrated it. These tops were the counterpart of today's convertible auto tops. They could be tilted up in foul weather to cover the driver.

The first lift truck was not a Hyster, but a "Towmotor". It had a lift capacity of two tons. "Thought by many to be the handiest rig in the plant," the *Gunner*, July 5, 1945, said, "it gets into places that larger ones (cranes) can't squeeze into." The Towmotor was operated by Bob Johnson and R. Cameron.

Now that Gunderson is spread out over 75 acres, it not only needs trucks and cranes, but it needs small vehicles to deliver its maintenance men and supervisors where they want to go, many miles each day. The *Gunderson News* issue of January, 1991 reported in its article, "New Wheels on Main Street":

"Gunderson purchased 12 Dihatsu mini pick-ups for inter-plant transportation. Ten are for the maintenance department and two are for material handling. They replace part of the fleet of old Cushman vehicles.

"The vehicles vary slightly from each other, with some being king cabs, and others being vans. A few have scissor lift extendible beds allowing work to be done in the air, and one Dihatsu is equipped with a dump bed."

"While the three-cylinder vehicles can go 30 miles per hour, they are equipped with a speed governor that limits them to 12 miles per hour. The new vehicles have doors, vents and heaters."

The welders, fitters and grinders

The joining together of adjacent edges of steel with molten metal was done by electric welding. But first, the pieces had to be fitted and held together while they were being welded. The fitters used clamps and various jigs and fixture to hold the material together. This was the job of the fitters.

After the pieces were welded together there was welding spatter to be removed, generally with wire brushes. Then the welded seams were ground down so they were smooth and fair. This is where the grinders came in. Sometimes there was porosity in the weld, or even an insufficient thickness of the weld. When this condition was evident, re-welding and re-grinding took place.

Another situation in which grinders were involved was defective steel. Some steel was shipped from the steel mill with undetected flaws, like rolled-in slag, air pockets, scabs or slivers. These flaws, if not too numerous to cause rejection of the steel, were removed from the surface of the steel by grinding or scarfing, then the resulting voids were re-filled with welded molten metal to restore the proper thickness and surface of the steel. This process required re-grinding to make the surface smooth again. When such defects in steel were found, the cost of repairs was charged back to the steel producer. Though such defects were considered very disruptive to production, it was hoped that disruption costs could be recovered, but often they weren't.

In many ways Gunderson's innovators have found methods to make the job of welding easier and more versatile. Two such time savers were the turning jig and the stud welder.

The *Gunner*, September 14, 1944 reported:

"Art Siebens demonstrated the jig he has designed to speed welding of parts for Gunderson gravity davits being built here for the U. S. Maritime Commission. Turning of the jig permits downhand welding of all parts, materially increasing the speed and quality

of welding. Ideas like Art's have helped Gunderson's maintain the reputation of 'the yard that gets things done.'"

At the very same time, one of Gunderson's most productive tools, if not the most important, was developed and written up:

"No matter what boat building job the men and women of Gunderson's may be called on to perform, it will be easier with these 'bull wheels'. (shown being fabricated) When installed on edge they'll make it possible to weld an entire hull downhand, eliminating difficult overhead welding."

These bull wheels were the fore-runners of the rotating welding positioners which held whole boat hulls and railcar frames in place and rotated them so that the welding could be performed downhand.

Then on September 28, 1944, the *Gunner* reported on the new stud welder:

"Just so's we can get those questions settled once and for all on the Rube Goldberg device shown here, (shown in the *Gunner*), it's a stud welder for LCM manhole cover rings. Designed by a commercial specialty welding firm, it was improved by J. C. Slought, (shown in picture). It's designed to place studs automatically, weld them in place with a single shot, and turn out a minimum of 15 manhole cover rings in an hour's time."

Later, in bridge construction, Gunderson shot thousands of stud bolts on bridge beams.

Then in April, 1978, the *Torch & Stinger* acclaimed Paul Remlinger's invention:

"A lab technician in the optical business for seventeen years, Paul came to work for FMC about four years ago, and is presently working on the railcar line. Paul's technical ability has meant time and money saved in Marine production.

"Paul got tired of welding on bulb flats during fitting only to have to grind the weld off again. So Paul came up with the idea of making a clamp that would fit onto the edge of the plate and hold the bulb flat up while fitting. His idea proved to indeed be efficient, and his clamps were re-designed and modified for use on standing frames and angles, and are presently being used in barge construction."

According to the May, 1978 *Torch & Stinger*, there were 900 welding machines in use at MRED, which attests to the enormous amount of welding that was performed in their shops. There were 53 welders in the marine division and 375 in the rail division. In the Linnton plant, July 3, 1941 equipment list, there was a grand total of nine welding machines.

Harold Knab, welding engineer, was in charge of the welding department in 1978. "Neil Shannon assists Harold with the technical and academic aspects, and develops training programs. Other weld technicians are Chuck Oswald, Leroy Butcher and Gary Luck."

In a story on electrical maintenance, the February, 1974, *Torch & Stinger* gave an indication of the number of welding machines in use that year: "Bob Snyder, foreman of the electric shop and his 17 men keep everything in the plant that is electric, maintained and in operation with cool efficiency. They are responsible for the operation of 25 overhead cranes, three whirley cranes, 450 welding machines, and wiring and lighting throughout the 76-acre plant. They repair welders, small motors and damaged welding guns."

It's little known, but there was a time when the purchasing department couldn't buy enough welding torch nozzles from its normal source of supply in time to meet its needs. So Max Langford, a Gunderson machinist in Fritz Dummer's machine shop, who had a small machine shop in his home, machined the nozzles out of brass rod. He turned them

out by the hundreds for us, and at a fair price too. Langford retired September 9, 1977 after 32 years in Fritz's machine shop.

The *Torch & Stinger*, March, 1976 issue, carried a story on boom welders. It said, "More shop engineering – again it's Fritz Dummer and Earl Pavey teaming up to make boom welders that improve safety and production efficiency on the railcar line. According to Earl Pavey, this boom welder is custom tailored to our line and is much less expensive than types made commercially."

Manufacturing engineering department activated during FMC ownership

This department, seeing the need to speed up the various shop processes, or to make them safer, or to enable them to produce a higher quality product, undertook the design, inquiry and selection of the necessary machines.

An example of their involvement took place in the form of an outstanding event in the history of Gunderson:

Four old wheel boring machines were retired from service. They were ancient when Gunderson bought them in the 1960's. There being no further demand for these machines, they were scrapped out.

A new fully-automated system capable of boring and mounting more than 80 wheel sets per shift, was activated June 27, 1984.

This is the equipment that loads wheels onto a conveyor and transfers them from the conveyor to two wheel boring mills where the wheel bores are machined to suit the wheel seats of the axles onto which the wheels will be mounted. Simultaneously, a separate machine loads axles onto a conveyor, where their finished wheel seats are measured for the correct wheel bore. Further down the system the axles roll into a position where a bored wheel is loosely mounted on each end of the axles.

From that point the axles with their loose wheels are rolled a ways further to the wheel press which presses the wheels into their final position on the axles. The pressures used to mount the wheels are measured and recorded on tape. The wheel mount pressures must fall within a given range, or the mounting has to be re-done. With the automated system, mounting rejects are minimized.

When the wheels are mounted, the assemblies roll further to the roller-bearing press where a bearing is mounted on each end of the axle, outboard of the wheels. Once this function is performed the wheel-set rolls to a station where an end cap is applied to each end of the axles. Then the wheel-sets roll on to storage for application into a railcar.

The new system consists of the following components:

- Two computer controlled vertical wheel boring mills.
- Two computer controlled, robotic, wheel de-stacking and mill loading units
- Two computer controlled, robotic wheel unloaders
- Two microprocessor controlled wheel infeed conveyors
- Dual direction, micro processor controlled wheel delivery conveyors
- Microprocessor controlled, hydraulic powered axle conveyor
- Microprocessor controlled, hydraulic powered premount station
- Hydraulic axle centering
- Chip conveyor
- Wheel mounting press

The benefits of the new system were an overall shortening of the time that wheels and axles were processed into wheel and axle sets. The cost of steel shavings, chip removal and clean-up were lowered significantly.

Needless to say there was an amazing array of material required to build the system. 100,000 feet of electrical wiring, 1,000 gallons of hydraulic fluid, 100 limit switches and photo eyes, and an array of computer controls and electric and hydraulic motors.

The description of this system said, "The control panel, a maze of push buttons, selector switches and indicator lights reminds one of a control panel in an aircraft."

"The system was designed in-house by engineering departments under the direction of Robert McClelland, Manufacturing Engineering Manager. Denny Rushing, Manager of Industrial Engineering, served as project manager along with Industrial Engineer, Steve Rouse. The installation was done in-house by maintenance workers supervised by Chuck Davis, Superintendent of Maintenance." This is another triumph of Gunderson, "Can-Do".

Then in 1991, Gunderson Inc. became a "Full Wheel Shop". The March, 1992 *Gunderson News* read, "Gunderson is a full wheel shop now, due to the used equipment that was installed last year. This means Gunderson now has the capability of turning axles and wheels, as well as mounting and demounting wheels and bearings.

"Having a full wheel shop means Gunderson can now offer more capabilities to customers."

This new shop has occupied the ground floor space in the 4700 N. W. Front Avenue building where the old offices were before they were moved to the 4350 building. At last viewing, the old 4700 building front door reposed against one of the walls in the wheel shop – a relic from the past and a nostalgic one at that. I don't know how many thousands of times I opened and closed that door coming to and from work.

Putting it all together

Once all the steel is ready to go into the various assemblies it is delivered to the fabricating shops for the necessary stages of construction. Presently, Gunderson Inc. has departments making underframes, side sills, end sills, car sides, car roofs and several other sub-assemblies. It has three major railcar Lines, #1, #2 and Railcar Repair. These are supervised by Larry F. Staples,Louis Szabo and C. "Chuck" Belt. The Side Building is superintended by Steve Schaeffer. In charge of all railcar production, is L. W. "Larry" Repp.

One sub-assembly of a freight car is the center sill. The center sill is "the backbone" of box cars, gondolas, flat cars. and others. An article in The *Torch & Stinger*, April, 1975, carried the caption, "The Backbone of the Railcar Line is Across the Street" and described the sills.

"This facility, (Known as the Quonset building) across the street, built in late 1945 or early 1946 to service the sale and distribution of Quonset buildings, is now the scene of center sill manufacturing. (See Footnote 1) The center sill is 'the backbone' of a railcar. Two Z-bars, welded together to form a U-shaped girder are then equipped with draft gears, couplers and center plates and transported to the underframe shop at the start of the railcar assembly line. Dorman Jackson is in charge. The day shift foreman is Hugh McLean and the Swing Shift foreman is Walter Kennedy. At full production, up to 33 men are at work there."

Then in September, 1975, the *Torch & Stinger* spoke of the underframe department:

"Quality and sound construction in railroad freight car design must begin with the underframe. FMC's frame fabrication shop is the start of the assembly line, where 44 men

piece together center sills, cross bearers, cross ties, bolsters, and brake system hub assemblies. General Foreman is Jim Rigsby, Larry Staples is in charge of the graveyard shift." Swing shift foreman was unidentified. Production was 20 underframes per day.

An example of how greater efficiency in the underframe line was achieved follows: "The railcar line has added a new feature in the underframe construction area," said the *Torch & Stinger*, September, 1975. The 20 horsepower, 260 foot long conveyor could handle four underframes weighing up to 25,000 pounds each. It moved the underframes from one position to another in 1-1/2 minutes. It "moves to men, rather than the men relocating several times during the day."

This installation combined the efforts of the plant engineering, boilermakers, machinists, pipefitters, carpenters, material handlers, electricians and painters. It was made in a two week period and included stripping the entire bay 2 of all material and equipment.

In March, 1976, *Torch & Stinger* announced, "Car Line Gets New Press." They referred to a press for holding in place the entire floor of a boxcar, within precision tolerances, while it was being welded to an underframe. This press was installed in January, 1976, on the railcar line in Bay II.

It was designed and engineered by Michael Hall, Manufacturing Engineering. General Construction Forman was Dwayne Staples.

"Who helped? The boilermakers built the frame, the pipefitters installed the hydraulic system, the machinists built the cylinders, the material handlers lifted it into place, the loft lofted the prints, and the electricians did the electrical hook-up.

"A special effort was made by the material handlers. Two 20-ton overhead cranes had to be re-strung to 30-ton capacity each to lift the new press weighing 53 tons. The installation was like clockwork due to their fine effort.

"The press was sub-assembled in Ways #1, then eleven major sub-assemblies were put together at Bay II by Texaco Road. At that point the entire press was moved up Bay 2 about 200 feet to its present location."

William R. Galbraith, Senior Vice President Sales and Marketing for the Greenbrier Companies said of this device, "It enabled us to get sophisticated with putting in floors in cars. Since we didn't have a car turner, this was a significant improvement in getting nailable steel floor into the cars and welded to the underframe."

Side construction was improved in two major steps. The *Torch & Stinger* issue of June, 1976 described the first: "The fixture that supports the railcar side as it makes its way along the assembly line will no longer be returned to the starting point by overhead crane, but will go underground. This system was conceived by Industrial Engineering."

"A system of chains and sprockets propel the side's carriage through the length of the operation, then after the side is completed, the carriage submerges underneath the ensuing carriage and return to surface at its beginning station.

"The hole for this conveyor was five feet deep, 18 feet wide and 280 feet long. 225 cubic yards of concrete were used."

This refinement, according to the *Torch & Stinger* of December, 1976, enabled the side building to produce 36 sides (18 cars' worth) per day. With the large amount of welding involved, two shifts were utilized.

The second was outlined in the November, 1981 *Torch & Stinger*: "Improvements to the side building are due to be completed in December, according to Manufacturing Engineering Manager Bob McClelland. Renovations include 'a new monorail transporting system and two unloading stations. Beginning at the blast booth, the side

assembly process will be controlled by a microprocessor and is the first operation in the plant where major processes have been automated.'

"'These improvements should bring about major cost reductions, increase the efficiency of the system and improve the work environment for employees,' said McClelland, 'The new system will be quieter, won't break down as frequently, and is fully automatic.'"

Al Huntley, side building superintendent, oversaw the construction of an estimated 60,000 car sides. He retired March 2, 1979 to go fishing, work around his home and make use of his real estate license which he kept in force for fifteen years.

Schedulers, planners and expediters

These men and women are the "lubricant" of the operation. It is difficult to imagine the complexity of their work. They must know all the parts that go into a car, see that they are being made fast enough and in the proper quantities to achieve the best economy and see that they are moved from one process to the next until they are in the final assemblies. In a job like that of Mike Stuart, Expediter Superintendent, one must have the persuasion of a priest, the patience of Job, the cunning of a politician and a cast-iron stomach. There are so many "ifs", "ands" or "buts" to procurement of material, that without expediters, everything would come to a standstill.

R. G. (Robert) Preston is Senior Planner/Scheduler and G. D. Johnson is Production Planner/Scheduler. These men and their crews must plan and schedule all production in concert with the delivery date for cars promised by the company to its customers. These schedules are changing constantly as the sales department "squeezes" into the schedule an extra lot of cars, or cancels one out, or sets one backward or forward. Every time this is done, Preston, Johnson and Stuart head for the aspirin bottle.

Pedro Gonzalez, master painter

Our most colorful pioneer in paint supervision was Pedro "Pete" Gonzales. He was around when Gunderson was entering barge building and railcar building in a big way.

These were the days when Pete was called upon to bring Gunderson into the age of painting under mass production conditions. It took a great deal of trial and error to make this transition, but Pete did it and remained calm and patient throughout. In semi-open conditions he and his crews painted barges and railcars in the cold, drafty winters and in the bake-ovens of summer. Each day, the temperature and humidity would be different and he would have to adjust his mixtures accordingly.

His son, Richard followed his footsteps and for a time worked as paint foreman in the marine department.

Pete retired (for the second time) March 27, 1981 after 27 years in various jobs including paint and blast supervisor. From 1975 until his retirement, he was responsible for testing paint and recommending solvents or heat to insure good coverage. Paint Superintendent Dean Mandrell said of Pete, "His knowledge of the job and the people is really irreplaceable. He's respected by the paint department and just about everyone who knows him."

I remember him in his white paint coveralls. My own father was a paint contractor, about Pete's stature and size. He too, wore white coveralls, without a drop of paint on them, so Pete reminded me of him.

On Pete's retirement his friends who worked with him presented him a gold pocket watch. Other gifts included the bicycle he's ridden around the plant for years.

According to Mandrell, each time the painters used a new color, Gonzales would

spray his bike, so leadman (at the time) Lee Urness scraped about 1/4 inch of paint off the bike and repainted it red.

When Pete retired for the first time, he and his wife became caretakers of Chet and Elaine Gunderson's Scappoose home.

Leo Smith succeeded Pete after his first retirement and worked until just recently when he died of cancer. Dean Mandrell took over the paint department in the 70's when the tankers were being built. Lee Urness is currently Superintendent of Paint & Finish.

The task of blasting the steel to bare metal before painting, fell to the painters. Much of the blasting was done in the blast house out on the slab adjacent to Ways No. 3.

A memorable gentleman was sandblast leadman on the railcar line. The *Torch & Stinger* of March, 1978 told of Ben Ware's thoughts as he was driving to work one day, "Something said to Ben Ware, 'What're you working for? I've worked long enough and I'm still in good health, thank God for that.' These thoughts led Ben to retire on February 24, 1978. He had been with MRED since 1962, 16 years. His foreman, Leo Smith presented Ben a gold railroad engineer's pocket watch with special engravings from his friends.

In December, 1969, a *Torch & Stinger* article entitled, "True Grit," said, "That's right! We are now blasting railroad cars with grit instead of copper slag that had been in use for many years."

A new grit blast system manufactured by Vacu-Blast of Belmont, California was installed. "This installation was custom designed to our requirements and is believed to be the largest of its type in the country used for railcars. The unit is entirely self-contained and permits continuous blasting without shutdown for shoveling sand, as was required with the old facility.

"The spent grit and foreign material removed from the car is transported by means of a vacuum to a concentrator, where the air velocity is controlled so that the dust and heavy particles are separated. The dust is transferred to a wet type dust collector and clean air is exhausted to the atmosphere, the dust being mixed with water and ejected as a slurry.

"The heavy particles are likewise transferred to a reclaimer where a vibrating screen separates the reusable grit from the foreign material. The reusable grit is then sent back into the system and used repeatedly. The foreign material is retained on the screen and periodically removed. The over-all performance of this installation has been very satisfactory, not only in reducing man-hours of blasting time, but also eliminating the unsightly and unhealthy cloud of dust that was prevalent with our old system."

In October, 1974, a new machine was installed to automatically sandblast and pre-prime sides of railcars. A car side was conveyed through the machine. When it emerged it had been blasted clean and primed. The machine's operator, at the time, was James B. Storey.

In March, 1992, *Gunderson News*, asked, "What's new in the shop?" The answer: it was, "A brand new grit-blast system has replaced the old system. The machine conveys the grit on augers to an elevator, and is lifted to a separator which separates the grit and dirt. The clean steel grit is then dropped into a blast-hopper and sent through the blast hoses.

"The system can be used for blasting both new and refurbished railcars; the old system functioned only on new cars. The system allows a speed up of production and does a better blast job."

Another advance in painting of railcars occurred in the early 70's when an infrared paint drier was installed for freshly painted railcars. This sped up the drying process from hours to minutes.

Still another advance took place when Gunderson began using the Ransburg air assisted airless electrostatic hand gun for paint spraying.

The gun, with an 80 KV electrical charge at its tip, electrostatically charged the paint, and the charged paint sought the nearest electrical ground, which was the surface to be painted. This principal in painting permitted up to 90% transfer efficiency, up to 30% less paint usage, reductions in maintenance, reduced disposal of hazardous wastes, and longer paint pump life. But the best news about the gun was that it reduces over spray and harmful volatile emissions by nearly 50% according to the *Gunderson News* article, January, 1990.

Plumbum– The pipe shop and steamfitters

The pipe shop has been a Gunderson institution since 1942. Now, however, several pipe shops are needed to service Gunderson's railcar and marine plumbing needs.

In August, 1973, *Torch & Stinger* featured the pipe shop of Jim Race.

"'Plumbum', the Latin word for lead, is the root word for plumber, or man who installs pipes. Though the men in the Marine and Rail Equipment Division's pipe shop are definitely not plumbers (they are pipe-fitters, Local 235), they share a long heritage, dating back to ancient Greek times in the art of utilizing pipe. The word 'plumbum' was originally associated with piping because ancient piping was made from lead, the only metal that could be made into pipe at that time."

Race had a staff of 35 pipe fitters and welders. They piped the ships and railcars and maintained all plant pipes that conveyed argon, carbon dioxide, mapp gas, oxygen, air, water and steam.

During the late 70's at the height of the tanker program and high railcar production, I venture to say that the size of the pipe shop expanded to several times that of the 1973 one.

Pete Welk's aluminum shop

Pete Welk's aluminum shop was founded in the back end of the 4350 N. W. Front Avenue building. The original purpose of the shop was to fabricate aluminum or other specialty metals. Workmen, skilled in working those metals were hired.

Welk's first notable project was a 71-foot long by 19.5-foot wide all aluminum hydrofoil gunboat hull, the TUCUMCARI, built for Boeing Airplane Company of Seattle, Washington.

Soon after that, the shop expanded to both steel and aluminum fabrication. They built ships' foundations, guard rails, ladders, masts, manholes, pipe supports and stairways.

Material Handling/Environmental Affairs/Quality Control

The job of material handling was a monstrous task, especially after Gunderson began building railcars and barges on a large scale after 1965. Consequently Gunderson created a formal material handling department. To handle the job, Virgil Hatfield was hired as Materials Handling Manager August 22, 1966. (See Footnote 2) Virgil was enticed away from Southern Pacific Co., where he had supervised the moving of heavy materials and equipment. He rapidly whipped the department into shape. He and his associates in the department initiated procedures for the orderly handling and storage of materials and carefully planned and laid out storage facilities.

The logistics of in-plant transportation that his department provided stretches the imagination.

It was necessary to handle about two carloads or truckloads of incoming material for every outgoing, complete railcar. For example, in October 1969, his department unloaded and stored 239 carloads of material. Then, of course, this material had to be shifted from storage to its various stages in the production line. Much of this heavy movement was made during construction of added facilities which made the job of scheduling material movements a very delicate one.

During 1969, 2,313 cars were produced at Gunderson. More than twice as many were produced in 1979, 6,027 to be exact. Extrapolating from 1969, it is estimated the material handling department moved almost 600 carloads and/or truckloads of material each month. Furthermore, during the time when so many inbound carloads were arriving, car demurrage penalties were held to a minimum. (Car demurrage is a penalty on the user of the car. If a railcar parks too long in Gunderson's yard the railroads levy a fine.)

At first, to those who purchased the material, Hatfield was a sore pain when shipments arrived too early, in his estimation. But as a result of his incessant proddings, inbound scheduling of shipments was done with much greater care. The single function of scheduling inbound material so that it would not arrive too early, but not too late, became so vital that purchasing decided to employ an expediter for the job. The job of expediter required a person with a sense of urgency and a concern with tying up as little of the company's funds in inventory as possible. Once the purchasing department had ordered the material and arranged a tentative shipping schedule, purchasing's expediter took over, in concert with the scheduling department, and slowed down or sped up the shipments in order to maintain the shortest practical interval between receipt of material and its use on the production line. Among the first MRED purchasing expediters were Sam Jackson, now a Senior Purchasing Agent, Doyle Thomas, Now Director Rail Services and Robert Murphy, who is now Traffic Supervisor/Purchasing Agent. Currently, G. D. Johnson, Buyer/Expediter does the expediting for purchasing, but when needed, some "pressure is put on" the supplier by Murphy, Allen Perry, Purchasing Manager and Frank P. Brogden, Vice President Materials.

The Japanese coined a phrase for inventory control, "Just In Time," which exemplified Hatfield's concept of inventory control. His ideal inventory was just enough, soon enough, not too much, not too late and just in time.

A student of Hatfield's technology, Craig W. Coffey, is now Assistant Vice President in charge of Material Handling and Control, Quality and Environmental Affairs, Safety and Security. In addition, Coffey has the responsibility for Loft production and N/C (numerically controlled) programming. R. E. Matson is Superintendent, N/C Loft Production. M. L. O'dom, loftsman, reports to Matson. (For lofting, see Footnote 3) Manager of Material Handling & Control, and reporting to Coffey, is M. P. (Mike) McMurry. Material Handling & Control includes the warehousemen.

On the subject of environment, Gunderson recognized in 1990 that its own environment could be enhanced. It planted "Maple Queen" trees along its boundaries along Front Avenue. The announcement, in the June, 1990 *Gunderson News*, said, "These trees not only beautify the area around us, but they assist in combating global warming by producing needed oxygen."

"Mr. Material Handling," between 1942 and September 1, 1977, when he retired, was Louie Ripoli. For short periods, his first jobs were carpenter's helper, then material handling, then rigging, and then back to material handling, where he stayed put, handling the warehouse. Virgil Hatfield said Louie was, "The man I depended upon most for many years. I was and am impressed with his honesty and dedication – not only at work but away from the job as well." I remember Louie for his precise record-keeping accuracy.

He knew at all times what material and equipment he had in his custody and where it was. His reports were in that excellent handwriting of his, so clear, concise and easy to read.

Making sure the seams will hold

Quality has been in sharp focus at Gunderson since the shipbuilding days of World War II. Yet it doesn't seem to have been formalized until the early 1970's when they began building the tankers for Chevron. In 1973 W. E. "Butch" Hunter was Manager of the Quality Control.

The June 1974 *Torch & Stinger* detailed the various types of inspection that were performed as well as the various functions of the new Quality Control department:

"Quality control must assure that the welding, machinery, and general quality of production at our division meets the requirements of the customer and the governing bodies of the industry, whether it be marine or rail.

"On the railcar production line, the Q-C team inspects cars for missed welds, possible flaws in material, such as laminations, completeness of the job and installation of safety appliances, all in accordance with Association of American Railroads regulations and customer requirements. Additionally, the Q-C department trouble-shoots structural problems and recurring production problems, maintaining liaison with the engineering department.

"On the tanker project, inspections are required under the strict requirements of more regulating bodies including the customer, United States Coast Guard, and the American Bureau of Shipping, each of whom have representatives in our yard. In order to comply with all of these regulatory bodies and produce a top quality product, the Quality Control people must be highly trained technicians, capable of using sophisticated test equipment. They must also understand the entire production system so they can identify potential areas requiring inspection. Their services must also be readily available to customer inspection team."

Inspection Methods

During a quality inspection, five basic types of inspection are employed:

(1) Visual – "An inspector with a well trained eye can tell a lot about the quality of a weld by its surface characteristics."

(2) Dye-penetrant or P-T test. The part is sprayed with a penetrating dye. If there are cracks in the material or other defects, the dye settles into them and acts as a light to reveal the location and extent of them.

(3) Magnetic particle inspection or "Magnaflux". The material is magnetized then sprayed with a fine ferro-magnetic powder. Then the cracks or flaws in the steel show up as concentrated magnetic field forms around each flaw. "This method detects surface and sub-surface flaws that a visual or dye penetrant cannot."

(4) Ultrasonic Test. The inspector may locate sub-surface flaws and laminations that may not show up in the first three types of inspections. "This $3,000 testing machine operates on a principle of reflecting sound waves. It has a screen that shows a peak or 'pip' on a line across it when a flaw is detected. The sound is generated through a probe placed on the surface of the material. The probe contains a crystal that changes high frequency electrical waves to ultra-high frequency sound waves. The sound waves travel through the material and are reflected back from the opposite surface. If a flaw is present, the sound wave will be interrupted and a 'pip' shows on the screen."

Not here to make friends

W. E. "Butch" Hunter described the functions of the department:

"Quality Control is at best, and elusive title to a department whose responsibilities lie in the area of inspection, correct and sales – yes, Sales!

"Quality and Sales go hand in hand; without quality, sales become very, very difficult, if not impossible. Quality, therefore, becomes a joint venture with production, engineering and inspection participating in an end result of sales.

"Quality must start with personnel and supervision, then grows into pride in accomplishment of a job well done. Pride in a job well done can be instilled into personnel through competent supervision. It follows that selection and training of dedicated people in supervision is the beginning of Quality Control.

"The experience and cooperation of the designated Quality Control department is at the disposal of any and all departments leading to SALES!"

The Quality Control department was not popular when they took a position on some defects that were debatable. Nevertheless, they held their ground and the defects were corrected.

Butch Hunter was featured in one of a series of FMC railcar ads which were placed in rail trade publications. One such ad appeared in the *Torch & Stinger* September 1975. The ad included a photo of Butch and was captioned, "Butch isn't here to make friends." The ad went on, "He may not make may friends, but you can bet he is respected.....When a car is delivered, we know Butch is happy with it. Friends or not."

Hunters's staff included Al Enos in charge of railcar inspection; Russell Stockfleth, marine machinery inspector; Jim Mills, non-destructive testing (NDT) and material inspector: and Mike Shunn, hull and backup railcar and NDT inspector.

Enos retired August 16, 1974 after 13 years with MRED. He began his career at Gunderson in 1962 as welding inspector. He had also been a foreman on marine and in the shop at various times according to the account of his retirement.

Current Quality Assurance department

Stockfleth has remained at Gunderson and in 1991, became Manager of Quality Assurance, reporting to Craig Coffey, Assistant Vice President Material Handling, Quality Assurance and Environmental Affairs.

Somewhere in between Butch Hunter and Al Enos was Howard Shipler. He was Quality Control Manager between February 7, 1977 and October 12, 1981, when he died from an illness. Shipler also was in charge of Security for part of that period.

The mouse that roared

Sometimes Quality Control was enlisted in solving environmental problems. On November 4, 1976, The *Torch & Stinger* reported that Plant Manager, Phil Lively, received an urgent call from Personnel Manager Muriel Spear. In as calm a manner as possible, she informed Phil there was a mouse in the department and asked for help. Lively called Quality Control and asked them to investigate. Joanne Berg of Personnel described the mouse "as being about 18 inches long and weighing about 17 pounds" as it roamed the department. Nine women in the department were standing atop their desks waiting for the capture of the unwanted guest." This is the report of Bob McClelland:

"Your constantly vigilant and ever-resourceful Quality Control Department was called upon to perform a service above and beyond the call. At approximately 1300 hours (1:00 P. M.) on November 4th, we were summoned by a caller to report immediately to

Ms. Spear's area, where a large and ferocious mouse was loose and terrifying all persons in the area.

"Using careful and well-planned stalking and capturing techniques, said rodent was dispatched to the 'Big Cheese Factory in the Sky'.

"Care was taken to calm and reassure the distressed maidens of the Personnel Department during the terrible time. During the entire ordeal, Ms. Spear was cool and collected and was an inspiration to us all.

"At approximately 1330 hours (1:30 P. M.) the mission was completed and the ordeal can be summarized: 'Sighted rodent, executed same!"

"By the way, the mouse was about two inches long."

Wet dock

Throughout this history not much has been said about the wet dock. It's not manned, per se, but many Gunderson and MRED men and women have worked on it at one time or another.

The name, "wet dock", refers to the estimated 8-foot wide by 516 foot-long floating catwalk (walkway) which jutted out into the Willamette River along the upstream edge of the old marine railway. The walkway was used for bringing supplies to the boats served by it and for mooring of boats floating in the basin, waiting for repairs and provisioning. One of the first uses for the wet dock was mooring, provisioning and general mop-up of the work on tank lighters during World War II. Later barges were tied up to both sides of the pilings along the walk way.

On September 9, 1943, a photo in the *Gunderson Gunner* shows, that out in the river on the end of this wet dock, the dock's catwalk took a right turn upstream about 100 feet to Chet Gunderson's new house boat. Then on March 2, 1944, in another *Gunner* photo looking out over the wet dock toward the river, the house boat was missing. But on April 13, 1944, another *Gunner* photo showed a new covered walkway which, I know, lead down to Chet's house. The house boat had been moved downstream and into the mooring basin and tied to a catwalk. This was a secondary catwalk about 8 feet wide, which jutted out into the river about 200 feet. It was just downstream from and opposite to the long wet dock. Boats were also moored, repaired and provisioned there. Though nothing was said about it, I believe the house boat was receiving too much turbulence from weather and from passing ships, therefore, for it to be safer and more protected, it was moved downstream and to the inside of the boat basin.

The wet-dock expanded to a finger dock (also referred to as "finger pier" or "outfitting dock"), 21 feet wide by 448 feet long, jutting out into the Willamette River, "against which refrigerated barges will be completed for delivery...," according the March, 1953 *Torch & Stinger*. The dock was built on peeled fir piles 60 feet above the water and had an asphalt paved, planked deck. The height probably was designed to be just higher than known previous flood levels. Chet Gunderson would see to that. (See Footnote 4). "In a 1964 appraisal of the Gunderson facility, there were six floating docks (1) main finger pier described above, (2) the one downstream across the mooring basin from the main pier to which Chet's boat house was moored, (3) another 8-foot wide by 40-foot long catwalk underneath the finger pier, (4) another one 8-foot wide by 50-foot long, upstream of the main finger pier, (5) another 8-foot by 85-foot further upstream and (6) still another 8-foot by 85-foot upstream and near to Texaco Company's Oil Unloading Dock.

Gunderson Rail Services

At the present time, the wet dock figures in as part of the revenue generated by the Gunderson Rail Services department. This and the Schnitzer dock (acquired by MRED in 1979 with the Schnitzer property) generated moorage rental at a time when revenue was most needed in 1985, and still continues to do so.

If and when the Marine department is re-activated rental of these docks will have to be coordinated with the need for mooring of Gunderson Inc.'s own freshly launched ships.

Rail Services is a new department, created to administer to the sale of railcar repair and refurbishment, railcar maintenance services, sales of railcar repair and maintenance parts, rental of buildings to outside parties and rental of moorage space to ship and boat owners. In general, this department handles virtually everything that is not new car or new marine construction.

Present head of this division of Gunderson is Robert A. Rea, President. He is assisted by Doyle Thomas, Director Rail Services. Others in the department are G. E. Rosebrook, Manager/Shop Coordination; M. A. Caputo, Supervisor/Project Inspections; S. J. Decker, Supervisor, AAR Billing Maintenance & Wreck repair; and D. M. Hoffenbacker, Finish Line Inspector. Operations Assistant is R. L. Addy.

Well being with Welborn – The medical department

The August, 1979 *Torch & Stinger* carried an announcement of the new 1,840 square-foot medical center opened in July, 1979:

"It was created to handle job-related injuries and illnesses and return-to work programs."

Located in the 4350 building, the center housed hearing and eye test equipment, an electrocardiograph, and x-ray room. Added later was lab equipment for testing blood and urine, respiratory testing apparatus, and physical therapy equipment.

Dr. L. Stanley Welborn, plant physician, who joined MRED in May, 1979, was the center's director. Prior to joining MRED, Dr. Welborn was a longtime member of the staff of St. Vincent Hospital and Medical Center, where he was a specialist in internal medicine and cardiology. Evalyn Smith, plant nurse at MRED for 13 years; Gail McKay (swing shift); Sherry Hering, part time, and Marsha Richter, x-ray technician completed the center's staff.

In conjunction with the center, a Limited Duty Employment Program was activated. Operated by Maury Galbraith with medical assistance from Dr. Welborn, the program "was designed to help injured employees return to work on a carefully controlled and scheduled basis."

"As far as we know," Dr. Welborn said, "this is the only program like this in the U. S. I work closely with Maury to try to find the nature of the disability and which individuals can do some sort of productive work. Keeping in close contact with the individual's physician, we start them back to work on a gradual scale. A lot of people who have been off and inactive lose muscle power and are unable to work full time. We keep close tabs on them; we want to do them a favor by restoring them to useful activity."

John E. Carroll, Jr., Division President, Philip Lively, Plant Manager and Marvin Henderson, Industrial Relations Manager were all instrumental in setting up this facility.

Separately, Dr. Welborn developed a 19 pound, portable, battery-powered device called an auto-resuscitator which, if used promptly, could detect and deliver therapy for heart attacks, strokes or concussions. Once the condition was detected, the device automatically delivered the necessary electrical shocks to restore the heart beat. It also

monitored the patient for changing conditions and re-initiated therapy if required. MRED had no connection with or ownership in Welborn's invention.

Dr. Welborn passed away March 20, 1989 as a result of a sudden illness.

The medical facility includes an inter-plant medical van for medical transportation inside the plant only. When the need for professional services arises, however, employees are provided regular ambulance service with trained professionals called.

Today there are six nurses at Gunderson. Laurel Redner is the full-time head nurse and she is supported by five other nurses who share the swing shift.

Spreading the word – Communications

This department handles all communication between Gunderson and the outside world. It is Gunderson's formal contact with the newspapers, radio and television. The department, as of July 16, 1991, is called Corporate Communications. Its Director is Bruce Harmon.

When significant events take place like the announcement of a railcar order or a ship launching, this group handles all of the details and supplies the written material for publishing. It plans and documents the ceremonies; and itemizes the precise schedule of events. (See Footnote 5) It supervises the production of company sales brochures and videos that demonstrate the products built by the company. Its press file is a valuable resource when one wants to research various important events.

A good example of press relations was given when Gunderson saluted its employees on television station KPTV-Channel 12 during the month of September, 1991. The station sent a filming and interviewing crew to Gunderson's plant to produce a 60-second spot titled, "A Salute to the Work Force." The spot ran on Channel 12 during the month of September. Employees were invited to "Tune-in and take a bow!" A video consisting of all 1991 television news coverage was combined onto one tape entitled, "Gunderson In The News, and given to all Gunderson employees. Curtis Salgado's *More Love Less Attitude* MTV hit was the background theme as Curtis Salgado and the Stilletos filmed part of their music video in Gunderson's Bay 2.

This department publishes *Gunderson News*. Julie Ward is its Editor. Staff Reporter is Yvonne Dubb. Its Managing Editor is Bruce Harmon.

The company magazines, currently *Gunderson News*, and prior to that, the *Torch & Stinger*, and before that, the *Gunderson Gunner*, have been the employees' main link to their many associates and to the company's management team. These house chronicles are and will be, as long as they continue, the history of the company and its achievements. They are and will be the record of the people who helped Gunderson Inc. reach its lofty position in the business world.

Ward and Dubb manage and coordinate all company functions such as employee picnics and retiree functions. When the retirees have their July picnic and Christmas luncheon, Harmon, Ward and Dubb are there to see that the "old-timers" are properly fed and entertained. For the Summer picnic, they coordinate with the retirees what salads or desserts will be brought to go along with the company-furnished main entree. They visit with the retirees and bring them up to date on the goings on at the company. They run the bingo game. With the cooperation of the purchasing department, they make sure that there are plenty of gifts, from fire extinguishers to garden hoses, to give out during the bingo games and the drawings for door prizes.

During employee get togethers, Harmon presented his "Oscar-winning" multi-media show. Harmon's shows featured the vibrant spectrum of people and the work they did. Almost every employee starred in them, sooner or later. In these shows, the rapid-

changing scenes flashed by until every important company activity was seen. There was marvelous music in the background. A person likes to see himself on the screen, and is proud and feels a part of it all, when the slide comes to his photo.

A special Award of Excellence was received for "The Future Is Now", multi-image show. This award was received from the International Association of Business Communicators.

The equivalent of several other "Oscars" for *Torch & Stinger* and MRED's Public Relations and Advertising Department came in the form of awards between January and June, 1981:

From the Society of Technical Communicators:
International Award of Excellence: Marine Brochure
Distinguished Technical Communicator's Award: Marine Brochure
Award of Excellence: *Torch & Stinger* (2)
Award of Excellence: Railcar Brochure

From the International Association of Business Communicators:
Over-all Excellence: *Torch & Stinger*
One-time Communications Program:
Ride Share '81
Design: *Torch & Stinger*
Design: Marine Brochure
Feature Photography: *Torch & Stinger*
Photography, black and white essay: *Torch & Stinger*
Pacesetter Citations (2) for *Torch & Stinger*

From EDITORS WORKSHOP:
Certificate of Excellence: Photo, *Torch & Stinger*
Certificate of Merit: Photo, *Torch & Stinger*
Honorable Mention: Photo, *Torch & Stinger*

I'm pretty sure that the *Gunderson Gunner* would have received some awards also if they had been given in those days.

The *Gunderson News* has also won a few awards of it's own from the Association of Railway Communicators (ARC):

Honorable Mention 1992: *Gunderson News*
Honorable Mention 1992: Video, "Gunderson In The News"
Distinguished Achievement Award 1993: Best B/W photography *Gunderson News*

Photography

Photography as a tool is not often heralded. In a manufacturing plant such as Gunderson, photography was essential for many reasons. Though not a Gunderson employee, Hugh Ackroyd, owner of Ackroyd Photography, Inc., could well be included in a list of Gunderson's "own". He has photographed hundreds of Gunderson's barges, bridges, buildings, ships and tanks. His aerial photos record the history of plant expansion as seen through his lens.

To compile this history, I rummaged through Hugh's Gunderson file and was rewarded with an excellent resource as to dates of events, and pictorial information on Gunderson's expansion throughout the years.

There were photos to assist in plant layout, material flow and for insurance purposes. Work progress photos, many from the air, were taken to document and date the work. These enabled Gunderson to collect progress payments.

They recorded weather conditions and storm damage. Sometimes, Gunderson could have been penalized several hundred dollars for each day they failed to meet a promised delivery date on a project. These photos proved conclusively that the delays were beyond the company's control. During the Columbus Day storm in 1962, hurricane force winds did substantial damage to the plant's roofs. Ackroyd recorded the damage on film for proof of insurance claims.

Colorful aerials of mile-long trains of Gunderson cars winding up the Columbia River Gorge, like a snake, visually portrayed the enormity of railcar work. The photos served as a sales tool in the selling of our products.

Other photos and their accompanying captions, published in company communications, praised the workers and documented the company's appreciation for attendance, ideas, record production, safety and quality work.

Press releases informed the community and the workers' families of what was going on at the plants.

There were the photos of ship launching ceremonies showing the owners and their guests; and the christenings of ships by their sponsors, usually a member of the owners' family or firm.

Technical photography was useful. Ackroyd took a detailed photo of hairline cracks inside the bore of an expensive hydraulic cylinder casting which was leaking fluid. As a result, a claim against a supplier's faulty performance was successful.

Another artist in photography, Bruce Harmon, now the Director of Communications for Gunderson and Greenbrier Companies, came later in Gunderson's history. In recent years his photos of stacks of railcar wheels, freight car castings, anchor chain or other materials, taken from a special angle or perspective, were composed with abstract beauty and aesthetic taste. His multi-media shows were of "Oscar" caliber.

Even the *Gunner* cameraman, William F. "Bill" Selleck, (I believe he was the cameraman for the *Gunner*) in World War II days, made many interesting photos including one of a pile of tow chains and another of a stack of life raft floats. The floats reminded me of a microscopic view of some type of virus colony.

The laborers and helpers

No industrial plant could do without the laborers and helpers. They held on and helped out when things were being put together. They fetched the bolts, nuts, welding rod and tools when they were needed. They kept the plant ship-shape, its floors clean, its debris swept and picked up and toted away. If something was out of place or presented a safety hazard, they moved it to where it belonged. They collected all the spent welding rods and disposed of them. They salvaged all of the material that could be re-used. They cleaned up after the painters and other crafts. They helped load and unload railcars. They performed one hundred and one chores that the journeymen didn't have time to do. Plant and equipment safety depended heavily on this craft.

Some of the laborers that spent a long time at Gunderson and MRED are listed here. They speak for all the laborers that have come and gone and for those that are still around.

There was John Classen, who retired from the swing shift in 1976 after 7-1/2 years at MRED. His supervisor, Zeek Turner, said he was very reliable and a hard worker. John was originally from Arkansas and worked on a farm from the time he was five years old. John remembers working in the cotton fields, picking 600 pound of cotton per day.

Miguel "Mike" Lara, Laborer's Leadman, eighteen years with MRED, retired January 13, 1978. His foreman, Mike Magnett, and Zeke's fellow workers, gave Lara a good send-off on the day of his retirement party – a round trip air ticket to Hawaii and a place to stay. As reported in *Torch & Stinger*, February, 1978, "While at FMC, Mike built quite a reputation for his sharp memory, dependability, and acute knowledge of our 76 acre facility." Mike Magnett said, "Mike Lara probably knows more about the plant than anybody I know."

Henry Warren, who retired February 2, 1979, "worked 7 years, 1 month, and 18 days at MRED and enjoyed every bit of it." Mike Magnett, Labor foreman, said, "Henry was a good worker. He was always here when we needed him." Dick Bornac, Material Control Manager, praised Henry for an "exceptionally good job, attendance-wise and safety-wise."

In 1980, Fannie Lee Galbert finished her last shift on the graveyard, having been on the work force since 1975. She said, "I've worked at FMC since 1975 and spent most of my time on day shift. But I like graveyard – it gives you days and half the night free. I've got a family of three kids and like to be able to spend time with them." In her retirement she planned to run a concession stand selling soft ice cream, and also planned to do missionary work for her church – the Church of the Living God.

John Blakely, a laborer, retired May 21, 1980, closing out a career at MRED since April, 1971. He planned to play golf, hunt, and fish with a retired brother and later, he thought he might do some janitorial contracting. His son, Jerry, also worked for MRED at that time.

Mike Magnett passed away July 21, 1993 at the age of 40.

Zeek and Modest retire

"I've been working since I was 16 and I'm 65 so I'm just going to hang it up," Zeek Turner said at his retirement party on March 20, 1981, "I started out eating beans so I go back to beans!" Zeek was a laborer foreman since 1973 but began working at MRED in 1968. One of his crew members remarked, "It's going to be kind of quiet here without Zeek."

Retiring on September 3, 1982 after eleven years with MRED, Modest Lynch, Railcar Laborer, "was always a pleasure to work with," said Pete Herron, Material Handling Superintendent. "He was a laborer and I was a Karry crane rigger and we unloaded a lot of railcars together, he's a pleasure to work with." He had an outstanding attendance and safety record.

Money crunchers–the controllers–Finance Department

In the beginnings of Gunderson history, the term "Controller", was not used in describing the office of finance. The first "controller" was Aino Malinen. Her title was Office Manager. Malinen had two or three assistants and performed all the functions of today's Finance Department. I suppose, at one time, when she was first hired by the brothers, she performed all of those duties herself.

The Controllers of today preside over the general ledger accounts and accounts payable, contracts and invoicing, and accounts receivable. They prepare the financial statements. To make the cash flow faster, they make it a point to collect the receivables at

the earliest moment and to postpone the payables until the last, legitimate second. Their offices track the job costs and see to the payroll. They sit down with management and help formulate strategies for the future. Today, this department is known as the Finance Department.

When Raymond H. "Ray" Spear signed on in June, 1942, he became the company's first controller. (See Footnote 6) Spear retired in 1958 and was replaced by Charles H. Hawkins. Hawkins was hired in January 1955 as Spear's understudy. Hawkins held the office until September 1, 1974, at which time he began a medical disability retirement. Hawkins was known for his outstanding management of company cash. He was replaced by Jack Quinlan who held the position until September, 1975.

Ken Knutzen signed on as Controller of MRED in September 1975. He served in that position until May 1977 when he became a staff assistant to the division manager. He was formerly Controller for FMC's Advanced Products Division in San Jose. Prior to that he served as Controller for the Northern Ordnance Division in Minnesota. His career with FMC began in 1947. Ken retired in February, 1978 and looked forward to much golf and travel.

Ralph Gibert joined the company May 1977 as Controller, replacing Ken Knutzen. Ralph was formerly Controller of the Environmental Equipment Division of FMC and prior to that had been with FMC in various accounting capacities for 23 years. Ralph retired from Gunderson, Inc. on March 31, 1987. In preparation for his easier days, Ralph bought some acreage in Hillsboro, Oregon where he and his wife lives. They raise sheep on their farm.

On Ralph's retirement, Howard D. Werth became Vice President & Controller. At the time of this writing Werth is still in that capacity.

Human Resources

This department manages human resources. It maintains relations with and looks out for the welfare of all employees. It keeps records on their attendance, compensation, health, performance, and safety. It interviews new hires. It coordinates employee compensation with all department managers.

A new and vital function of the Human Resources Department was added when federal law outlawed discrimination in the workplace against women and minorities. Title VII of The Civil Rights Act of 1964, as amended in 1972, generally prohibits employment discrimination on the basis of race, color, religion, sex and national origin. It was also extended to physically and mentally handicapped, disabled veterans, and veterans of the Vietnam Era.

FMC Corporation's Equal Employment Opportunity policy, which was re-affirmed by MRED, stated in part that, "Employee conduct, whether intentional or unintentional that results in verbal or physical harassment, abuse, or intimidation against any person on the basis of race, color, religion, sex, age, national origin, or handicap, is illegal and will not be tolerated. Any attempt to obtain favors, sexual or other, from any person by harassment or intimidation or in exchange for preferential hiring, promotions, compensation or other conditions of employment is prohibited. Such conduct will result in severe disciplinary action, including discharge."

Over 60 employees and supervisors attended a seminar presented by Dick Stiffler, FMC's EEO Trainer from FMC corporate headquarters in Chicago. In his seminar, which was entitled, "Boomerang II", he compared the use of the Australian boomerang to an "employer's shock" when discriminatory policies or practices boomerang –and discrimination penalties strike employers in their pocketbooks. The May-June 1982

Torch & Stinger covered Stiffler's presentation and outlined corrective procedures.

The administration of EEO laws is now one of Human Resources most vital responsibilities. Failure to enforce these regulations exposes an employer to stiff penalties.

In tracing the history of this department back to the beginnings of the company, again, Ms. Malinen had this activity under her wing. It was called, simply, "Personnel". Compensation was handled directly by the Gunderson brothers.

When the Front Avenue plant opened for business in 1942, Esther Sonnenberg handled personnel. Then in 1943, Timothy Wood was brought in as Personnel Manager. He was there only a short time and Sonnenberg was reinstated as manager until 1948, at which time she left the company. About that time, Muriel Spear returned from college and, in a short time, became Personnel Manager. Muriel retained the position until her retirement June 29, 1984. (See Footnote 7)

During 1983, and toward the end of her career, Muriel and her department developed a program for employees 45 years and older, who were approaching retirement age, and their spouses, to help them in their planning for that very significant milestone in their lives.

She enlisted the aid of Sally Fish and Leo Walsh of Far West Federal Bank. Topics of the seminar included planning for new occupations, hobby selection, maintenance of physical and mental health, management of financial resources and others. All subjects of the classes were thoroughly covered. The financial topics were especially informative because they explained the language and methods of investing, and the pros and cons of each, things that the average individual may not think about during his or her busy working life.

Ms. Spear said, "Successful retirement requires careful planning, since the average retiree looks forward to one-fourth of a lifetime in retirement. Making the most of these years is a challenge faced by everyone. Our workshops will help meet this challenge."

In April, 1974, a new position was created at MRED, Manager of Industrial Relations. The position encompassed Personnel, Safety, Training, Employee Relations, Salary Administration functions, and assisting in Labor Negotiations and Long Range Planning.

Appointed in April, 1974, Martin R. Snoey was the first manager to hold this new title. He came from FMC's Machinery Group Planning in Chicago. Snoey's qualifications were: A Master's degree in Mechanical Engineering from the University of Washington, a Master's degree in Business Administration from Harvard, a registered professional engineer in California and Washington. He held the position for about sixteen months.

Marvin H. Henderson succeeded Snoey as Manager of Industrial Relations August, 1975. He transferred from FMC's Citrus Machinery Division in Lakeland, Florida where he was Personnel Manager. While at Lakeland, he became the city's Commissioner, then its Mayor. He formerly served as Production Manager, War Contract Termination Supervisor and Purchasing agent for the Florida division.

He retired from MRED at the end of April 1982. On the occasion of Henderson's retirement, Division Manager John E. Carroll, Jr. said of Marvin, "It would have been easy for a man of Marvin's experience and tenure to remain in Florida and retire there. But instead, he took on a very tough industrial challenge and came out west. His honesty, integrity, and directness enabled him to most capably perform the job."

Marvin made outstanding contributions to MRED in the field of labor negotiation, safety, medical, advertising and public relations. Portland was fortunate to gain him as a

citizen. As busy as he was, he was active in civic affairs, including Rotary, Northwest Industrial Neighborhood Association (NINA), President of United Metal Trades Association, and Chairman of the Health Care Cost Containment Committee for the Portland Chamber of Commerce.

James H. "Jim" Johnson joined MRED on March 1, 1982 after 13 years with Owens/Corning Fiberglas Corporation. He officially replaced Marvin Henderson on May 1, 1982. Jim was a graduate of San Jose State University with a B. S. Degree in Industrial Relations and Personnel Management. Upon graduation, he was hired by FMC in 1964. He worked in industrial relations for four years, then moved to Owens/Corning Fiberglas for 13 years where he was Personnel Manager at several of their divisions. Finally, he was appointed District Personnel Manager in Portland responsible for 11 plants in four western states. Johnson was MRED's Industrial Relations Manager until November, 1985 when he was succeeded by George Higgins.

George Higgins was appointed Labor Manager in January 1975. He was formerly Manager of Industrial Relations for the Alaska Defense Warning System for the R. C. A. Corporation. He was a 1952 graduate of Ohio University where he obtained a Bachelor's Degree. In 1956, after a two-year stint in the Air Force he received a Masters in Business Administration.

George served as Human Resource Manager until his retirement in April 2, 1993. Scott S. Eave took over as Director of Human Resources and remains in that position as of this writing. Bridget S. Davis and Pat Rosebrook are the Human Resources Administrative Assistants. (See Footnote 8) The department now employs three recruiters for hiring.

Two good example of looking out for the welfare of the employees came to light in the March and June, 1991 issues of *Gunderson News.*

The first was the announcement that, "Non-English speaking employees have been attending a Gunderson sponsored English class every Tuesday and Thursday in the Safety Building since January." When the first group graduated in late March and a second group graduated in early May, they were congratulated by L. Clark Wood, President of Gunderson Inc.

The second event, in June, was the announcement by Clark Wood that the company would, "Provide a dedicated area for training. We are remodeling the old safety building into a 'training building' so that we will be able to offer training to our employees to improve their knowledge and skills in areas relating to doing our job better."

Security

Until Gunderson opened its Front Avenue plant, the security consisted of one night watchman at the Linnton plant. Then, when World War II began, it became necessary to have about six security guards, around the clock, each manning an entrance at both plants.

During World War II, everyone who worked for Gunderson was required to have a United States Coast Guard Port Security Card. The card read, "Identification only, not a pass." One had to display the pass in order to get through the guard gate to go to work. To obtain a pass, one had to give up his fingerprints, fill out extensive personal history forms and have a photo taken which was imprinted on one side of the pass. These passes were required well into the late 1960's. My last card expired January 12, 1967.

After World War II, up until 1967, plant security was mostly subcontracted out, and was not always a satisfactory situation. In 1967 MRED recognized the need to protect the plant, the work and its people. The security department was placed under the directorship

of Virgil Hatfield, who was already in charge of Material Handling. (See Footnote 9)

In 1974, Hatfield had a group of eleven officers in security. His Security Chief was Cyril Holton. Holton's command included Lt. Alex Johnson, Sgt. Morgan Fleck, Sgt. Gerald Croom, Sgt. Don Halverson, Officers David Kerr, Richard Porter, Allan Newsome, William Shipman, Ronnie Spinks and Ward Ray.

Holton retired August 23, 1974 after eight years of security duties with MRED. Actually he worked two years at MRED before becoming an employee. He worked with Pan-Pacific Security who was providing the service to MRED as a sub-contractor.

When Holton retired on September 1, 1974, Lt. Alex Johnson became the new Security Chief. Johnson held the post until he retired November 15, 1985. Johnson's replacement on December 1, 1985 was John L. Sexton. As of July 16, 1991, Security Chief Sexton reported to V. K. "Val" Lesina who was Maintenance and Security Manager. Lesina's Maintenance Superintendent was J. J. Gannon. Howard Shipler, was in overall charge of security from February 1977 until he passed away, October 12, 1981.

The January, 1974 issue of *Torch & Stinger* carried an article on MRED's security staff. It's quoted: "To be a security officer at MRED, strict qualifications had to be met. Holton listed several: A man must be able to cope with any situation, make decisions quickly in emergencies, function well on his own, know the location of fire and emergency equipment, treat injured persons on swing and graveyard shifts, direct the ambulance in and out of the plant, direct traffic, regulate parking, assist large loads across Front Avenue, and perform various other duties while on patrol.

"What does a security officer do while on patrol?" Holton asked, "the 24-hour day is split into three shifts. An officer is on duty at all times, and is responsible for manning the gates at shift changes, checking employees for possible pilferage, controlling interior lighting for the plant, watching parked cars to protect employees against car theft, break-ins and gasoline theft, and keeping a complete log of all vehicles in the plant. When outfitting begins on the tankers at Swan Island, our security forces will be there, too.

"One of the most common problems encountered while on duty is fires caused by spontaneous combustion. This is particularly frequent in the paint shop during long weekends in the summer. No losses have been recorded in recent years, however."

In July, 1981, the *Torch & Stinger* carried an article on the fire watch. It is quoted here: "Fire Watch – under the ways, Harold Christensen has the little known but important task of fire watch. As barges go together on the ways above, molten metal from welding and burning drop on the greasy wooden structures below, causing a constant fire hazard. Harold moves beneath the hulls watering down the giant timbers. According to Harold, a ways fire, if ever allowed to start, would be very difficult to extinguish, with potentially disastrous consequences. On swing shift, Harold's counterpart is James Chambers."

A characteristic of this security department is their friendly but firm military bearing. It is conducive to discipline and respect for their heavy responsibility.

The big spenders-The purchasing department

Last, but not least, the department which accounts for the outflow of over 50% of the company's cash is the purchasing department. Needless to say, the less it spends, the better is its job of buying. And the buy is better when it arrives closest to the time of need. Whereas the Finance Department strives to stretch the cash as far as they can, Purchasing tries to shrink the need for it. Between the two, fewer dollars are needed to run the business.

Purchasing's job is to obtain all materials and services for the manufacturing plant. It buys maintenance, operating and repair parts (Commonly referred to as MRO) for the plant's equipment and tools. It buys machinery and construction materials for new facilities. It subcontracts the manufacture of machined parts and services which aren't available in-house. It is also responsible for traffic, freight rates, and freight damage claims. Still another duty is to enforce claims upon a supplier for any defective material he might have shipped.

Another major function is pricing of material and services in bids to customers. Before the sales department can quote a customer, purchasing must price their estimates. This is a vital function, because the best prices must be available for the company's bid to be successful.

Purchasing managers strive constantly to reduce the cost of goods and services. They're able to do this in a number of ways, such as multiple bids, make-or-buy decisions, value or cost-price analysis, supplier capability and quality appraisal, surveillance of vendor performance, careful scheduling of material shipments and favorable payment terms. Inbound transportation costs are a substantial part of material costs, thus they have to be held to a minimum. Lot-sizing is an important consideration here.

Purchasing managers follow economic and political trends and take whatever action is necessary if the company's interest is at stake. They must be aware of all ongoing labor problems faced by every one of their suppliers, because a strike causes a stoppage in the supply line. Natural disasters, like storms and earthquakes may affect their supply as well.

Finally they are responsible for disposing of surplus material.

While they are performing all of these functions they must do so with good conduct. They must be fair in their dealings, considerate of their suppliers, and obedient to our country's anti-trust laws.

In the early years of the company, Chet Gunderson ordered whatever supplies were needed, then, when Al Gunderson entered the business in 1923, he took over the buying. In the mid 1930's, before the Linnton Plant was established, Sam Fullman, Parts Manager, did most of the buying. His buying consisted of ordering truck wheels and automotive repair parts.

When the Linnton Plant was established in about 1937, Herbert "Herb" Clayton, became office manager and reported to both the Gunderson brothers. In addition to time keeping, costing and invoicing the customers, he bought supplies for the manufacture of trailers and tanks which weren't ordered by Al and Chet. These supplies consisted of trailer brakes, trailer hooks, reach poles, and steel. The big ticket items, like the axles, tires and wheels, were still ordered by Al Gunderson. I believe Herb also bought maintenance, repair and operating parts such as tools, friction tape, electric cable, wrenches and pliers.

When I came to work for Gunderson in the tool room at the Linnton plant on February 1, 1938, my boss was supposed to be Herb Clayton, but I found myself taking orders from not only Herb, but also from Chet Gunderson, Al Gunderson, Aino Malinen, headquarters Office Manager at 14th & Everett; and Adolph Strid, Plant Superintendent at Linnton.

My job in the tool room consisted of dispensing tools to the workmen, repairing the frayed cords of electric drills and extension cords, and keeping the tools in good working order. I also acted as receiving clerk. When a shipment of tires or wheels came in, I rolled them into the plant and stacked them into neat piles for later dispensing to the shop. Stacking of the tires was the toughest part of the job. They were piled eight high in each

stack. (Enough for one trailer) For a skinny 125-pounder, it was amazing how I learned to jockey the heavy tires, without back injury, one on top of the other, until the eighth one was stored.

After about a year in the tool room, Clayton left the company and I received my first promotion. I not only moved into the front office (which was entered through a door from the tool room) but I retained my old job as tool room attendant. There was a bell at the tool room window which the workmen rang when they needed parts or service.

My new responsibilities included time-keeping, costing of jobs, billing out the work and buying of parts and steel. After about a year, the brothers allowed me to hire a tool room attendant, and in about 1941, I also hired a male secretary. (There were no women workers at the Linnton plant except a janitor and she worked only at night when no one was around.)

During 1941, the United States, under Lend-Lease, gave aid to the Allied Forces before entering World War II. Under this program, Gunderson became active in manufacturing doors, hatches, manholes, and crow's nests for shipyards overseas. As a result, my duties gravitated towards buying. A bookkeeper, Robert Orr, was hired to do the costing and time keeping.

During the building of the Front Avenue plant in early 1942, I bought most of the building material according to instructions and buying lists received from Chet Gunderson.

When the Front Avenue plant began building tank lighters and life boats, I was placed in charge of buying materials for the lighters and supplies for the plant in general. I was assisted at Front Avenue by Ernest "Ernie" Pautz, who was shipping and receiving manager and parts department manager. He bought most of the small tools and supplies. We continued to build trailers and tanks, and I bought the material for those. My office was still at the Linnton plant.

Separately, Frank A. Bosch and Don Law did the buying for the life boat production. I had nothing to do with that department.

I continued buying for both plants from the Linnton office until the end of 1943. By then, buying for Front Avenue took most of my time so I moved my office to the Front Avenue Plant. An assistant, Pat Patitucci, remained at Linnton and bought the supplies, while I bought major steel and materials at the Front Avenue office. Ernest "Ernie" Pautz was Part Manager and in charge of shipping and receiving at Front Avenue, and bought small tools and hardware.

When the Linnton plant closed in 1945, Patitucci moved to the Front Avenue office as a buyer. By then Jack D. Herron had come on board to buy MRO materials.

Some time in the late forties, Ray H. Kinchloe, though he was never formally associated with the purchasing department, became one of my most valuable resources. When Ernest "Ernie" Pautz died, Ray was placed in charge of shipping and receiving. He was already in charge of the steel inventory. He knew where every piece of steel was and always offered a close substitute when the right size wasn't available. His help in the area of traffic was outstanding, particularly with respect to the fabricating-in- transit operation with which Gunderson was heavily involved. (See Footnote 10) He was Gunderson's good will ambassador to all of the railroad yard foremen and switching crews.

When World War II ended, the lifeboat division was closed. Frank Bosch was transferred to sales at the 14th & Everett business, but soon after, left that operation to go into a business of his own. Law also left Gunderson immediately after the war ended. The surplus material left over from the lifeboat operation was turned over to me for disposal.

From 1945 on, I was in charge of all purchasing and traffic at the Front Avenue plant until my retirement, June 30, 1984. Allen B. Perry succeeded me as Purchasing Manager and remains in that position as of this writing. At that time, Perry had already logged 18 years in purchasing with MRED, the last 10 as assistant manager of purchasing. Since 1990, he has reported to Frank P. Brogdon, Vice President Purchasing/Materials.

Brogdon began his purchasing career in 1955 as a clerk for the Western Pacific Railroad. He became the railroad's Director of Purchasing and Materials. Still later, when Western Pacific was merged into Union Pacific Railroad, he held the same title for the new owner. For the two years prior to signing on at Gunderson Inc., he was Vice President, Sales for the railroad supplier, Cedrite Technologies Inc.

The purchasing department ranged in size from one person to nine in 1967, 11 in 1969, 12 in 1970, 10 in 1971, 16 in 1974, 18 in 1979 and 12 on July 16, 1991. The department expanded and contracted as the company gained or lost weight.

For whatever success I have had in the purchasing profession, I owe a great deal to my former associates. Those still active with the company are:

Allen B. Perry, Assistant Purchasing Manager and now Purchasing Manager
Michael T. Illias, Purchasing Group Manager – MRO (Retired end of 1991)
Samuel A. Jackson, Senior Purchasing Agent
Patricia F. Juggert, Buyer and a former secretary
Keith A Kugel, Purchasing Group Manager -Steel/Production Purchasing
Robert "Bob" Murphy, Traffic Supervisor/Purchasing Agent
Doyle Thomas, Purchasing Agent, Marine (And now, Director Rail Services)

I'm also indebted to former buyers, secretaries and other associates who left or retired before I did:

The late Anita "Tex" Baird, a Secretary and later a Buyer;
Jean Carlson, former Secretary
Jane Brooks, my secretary during World War II
Jo Ann Cox, Former secretary and later a Buyer
Mike Culbertson, Marine Buyer
The late John Duffy, Senior Marine Buyer
Lee Easton, Buyer, Outfitting of Tankers at Swan Island
The late Robert Erickson, MRO Buyer. He retired in 1966.
The late Jack D. Herron, Purchasing Group Manager –MRO. (See Footnote 11)
Charles H. "Chuck" Hetzler, Buyer, Steel
Eugene L. Hillstrom, Secretary at Linnton, Plant Pre-World War II, 1941
Jimmy Ince, Secretary at Linnton Plant, Prior to and during World War II. (He was drafted into the armed forces about March, 1943)
Ray H. Kinchloe, Retired December 27, 1963.
The late Kitty Lackey, Purchasing Expediter
Jim Love, Marine Buyer, Tankers at Swan Island
Helen McMeekin, my secretary during World War II
Gerald Palmer, Vendor Claims and Insurance
The late Pat Patitucci, Buyer, 1940 to mid 1950's
The late Ernest "Ernie" Pautz, Parts Manager and Shipping and Receiving Clerk. (He was not a purchasing department employee but a valuable resource.)

Pam Pemberton, Clerk
Jack Roberts, Marine Buyer
Diane Stangel, "Secretary to everybody but Benny"
Patricia "Pat" Younts, Perry's former Secretary and substitute Secretary to me when my regular ones were away

All of the above were truly professional in their chosen field. They were ethical in their relationships with their suppliers. Their sense of urgency with respect to getting the job done and supplies in on time was outstanding.

I am unable to list and thank all of the other buyers, clerks and secretaries not mentioned, who worked with me before the above listed groups did. Records of the names of these are no longer available.

Footnotes:

(1) See Chapter 9, "Period Of Trial And Error", and Chapter 17, "An Interview With Percy Wood" for story on Quonset building.

(2) See Chapter 18, "The Gunderson Experience", written for the history by Virgil Hatfield.)

(3) The art of lofting was covered in Chapter 9, "How To File-A-Way a Buick".

(4) A January 28, 1953, Ackroyd Photo No. 4139-2 showed new elevated finger pier.

(5) See Chapter 21, "Out To Launch".

(6) See Chapter 20, "R. H. Spear".

(7) Muriel's career is traced in Chapter 21, "Out To Launch".

(8) Bridget A. Davis contributed much information concerning the transition of management in Human Resources and other departments.

(9) See Chapter 18, "The Gunderson Experience", and a section within titled, "Plant Security". Written by Virgil C. Hatfield for this history.

(10) See Chapter 9, "GB Takes To The Rails" for Kinchloe's vital contribution to Gunderson's success.

(11) See Chapter 17, "Michael T. Illias", and "I Can Get It For You Wholesale". The latter features Jack D. Herron.