CHAPTER THIRTEEN

Endings and beginnings

Some people take to music, others are natural mechanics. Companies are like that, too. Gunderson has always been willing to take a look at almost anything — from fertilizer to sawmills — marine vessels to railcars. Over the years, quite a few U.S. companies have had that attitude. Not all of them have survived. One reason that some fail has to do with an inability to recognize their weaknesses.

But, just as important as facing your flaws is capitalizing on your strengths. Gunderson had a strength — had it almost from the first, in fact: those innovative double-axle logging trailers first built at the Linnton plant.

Highway trailers weren't the ticket, but something much like them was. Gunderson phased out production of logging trailers in the early 1950s as the market became competitively saturated.

Gunderson's future was on wheels, though. Wheels that ran on rails.

The new direction wasn't just based on difficulties in the logging trailer market. The handwriting on the wall clearly indicated that too many other steel fabricators were entering the tank, bridge, and building arena. These new firms, added to the already heavy competition from big steel-owned subsidiaries (U.S. Steel's American Bridge Company, Bethlehem Steel's Chicago Bridge & Iron, etc.), spelled great problems here, too.

Warren Howe was the contract manager for Gunderson at the time. He gives this account of the period:

"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 bid 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. Generally these jobs have been successful and profitable.

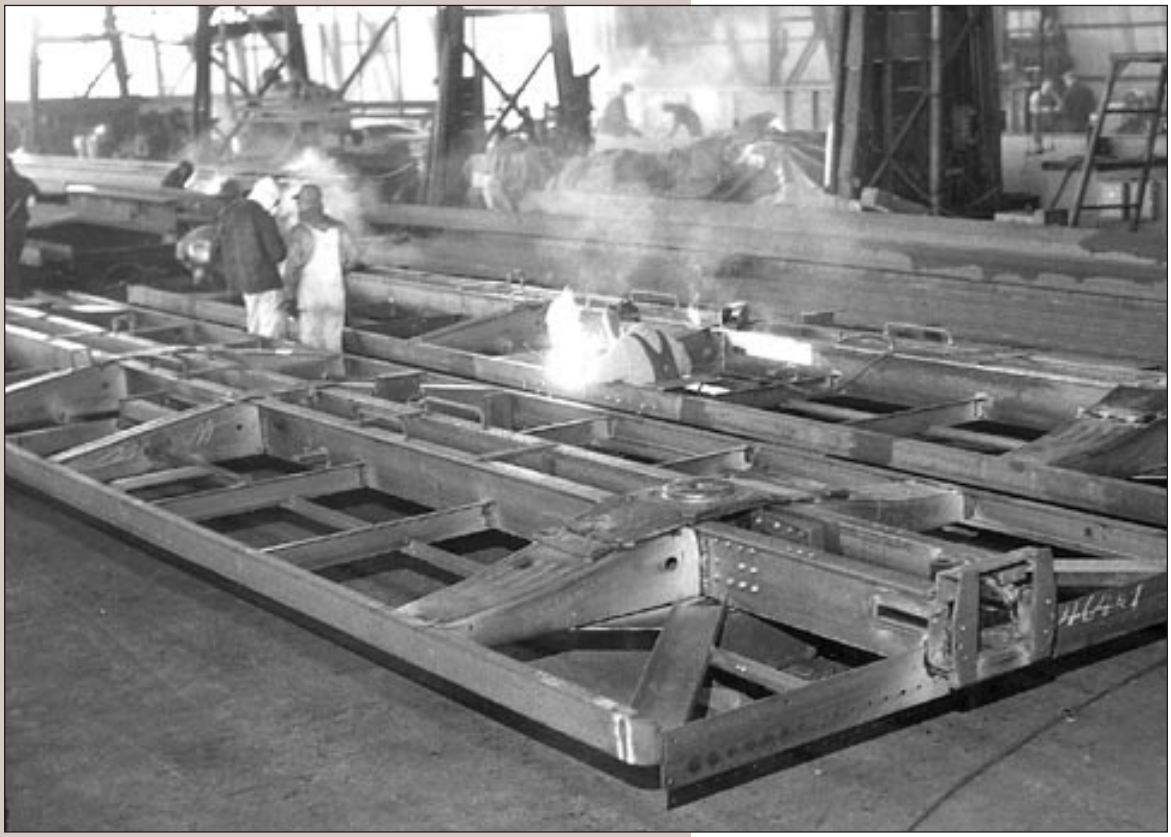
"These jobs were one-time jobs and often were frantic from beginning to end. By frantic, we mean getting the material ordered, preparing detailed plans, scheduling through the plant, writing specifications, and arranging a multitude of details. We were delighted when we won a job. The next daylight was 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. Often Al Gunderson, vice president, used to say that he wished we could get into a manufactured product to eliminate some of the hassle. Little did he know that the first part of his wish would come true. However, it would not quite be the ticket to simplicity!

"There came a period in the late '50s when there were fewer projects to bid on. Work was slowing down in the plant. Dangerously so. At one point Al Gunderson called some of (his top managers) into his office ... and said that if business were to continue downhill he'd have to close the plant."

Howe remembers that "the flow of plans and requests for bids had slowed down to a trickle. We began to look each request over more carefully. Through the years we had received plans and requests for bids on railroad cars from Southern Pacific Railroad. 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 boxcar underframes for Southern Pacific.

"For lack of something better to bid on, we halfheartedly went through the usual routine of taking off the material, submitting the material lists to purchasing for prices, figuring labor, all the other factors, such as freight, overhead, etc. We submitted a bid. Lo and behold, we were low bidder! And substantially low!



Southern Pacific Railroad started Gunderson in the railcar building business in 1958 with the first order of these boxcar underframes.

"As soon as we heard this we quickly reviewed the plans and our competitors' 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.

"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.

"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."

The brothers reasoned that they could achieve a much shorter product turnover because the underframes would be produced rapidly, and shipped and paid for as quickly as they were completed. This differed dramatically from the lengthy, time-consuming process of completing a bridge, a building or a ship. It was sometimes months before the money could be collected on some of those large projects.

Gunderson's first railcar, a drop-bottom gondola, was delivered in 1960.

And there was another advantage: sales volume. The quantity of underframes needed by the railroads was huge. It could mean a substantial increase in revenues over bridges and buildings produced in the same time span.

While finishing the last of the underframes, Al and Chet and their key managers began discussing how to keep the company operating in the future. They knew they were now good at making the toughest part of a rail car, the underframe. Their welding ranked among the best in the steel industry. Their facilities, though ample for underframe work, would be small for freight car production but could be expanded in proportion to the size of orders they received. They decided to add Gunderson to the nation's list of freight car builders. In 1960, Gunderson successfully bid to build 200 70-ton capacity coal gondola cars with hinged, drop-bottom doors for Union Pacific Railroad.

News of the order quickly spread throughout the rail supply industry. Rumors were rampant that Gunderson had bit off more than it could chew, that of all cars to stay away from when entering this field, it was the drop-bottom gondola.

In order to cut costs the company decided to fabricate the drop-bottom doors itself, because the major parts were expensive and freight costs were high. To do this, it needed a huge press. It bought a scrap 1,000-ton capacity press, repowered it with a new hydraulic system, and made new steel columns from old surplus ship shafts. The dies were made in-house as well. This marvelous machine, literally built from a scrap heap, was an example of the engineering know-how of Leighton Johnson and Billy Love.

Henry Correa, president of ACF Industries, one of the largest competitors, asked Chet if he could visit the Gunderson operation. He probably wanted to see what that young upstart carbuilder was up to and assess its impact on ACF's future. Chet agreed on the condition that he could visit ACF in return. When Correa saw Gunderson's press, he asked Chet where he got it and how much it had cost. Chet told him they had resurrected it from the scrap heap for about $15,000. Correa exclaimed, "Hell …we just paid $125,000 for the same thing, new!"

Al Gunderson's wish had come true. Gunderson Bros. Engineering Corporation was now in the mass production business. This was the beginning of the modern era at Gunderson. Growth in this area would be phenomenal in years to come.

A railroad car frame — a whole car, for that matter — is not the same thing as the gates of a dam, a bridge, or the structural skeleton of a great building. But, smaller steel structure work can benefit greatly from experience in those fields.

So, while still participating in many of the other areas for which it was already famous (marine conveyances, etc.) the company enthusiastically began to explore its new, surprising market for railcars.

As each new railcar order came in, the manufacturing facilities were lengthened, the car line straightened out for greater efficiency. The first run of gondolas was built in confined quarters with room for only a few cars in one bay. When a car was completed it was hoisted in the air and carried to a rail spur that 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 crossover was built so that 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, a better way of getting the cars out of the plant had to be found. "Rube" Nelson got the idea of a transfer table on rails, which would roll sideways between the car line in Bay One and the line in Bay Two. It was called "The Gunderson Railway — shortest in the world, goes nowhere — only sideways."

CHAPTER FOURTEEN

Changes reshape Gunderson

As the company reshaped itself as a railcar manufacturer, other changes came into play. In 1964, the Gunderson brothers decided to sell the business. Aside from their advancing age and personal differences, the main consideration was the huge tax burden that would fall to the remaining brother or to their heirs if one or both of them died.

Several deals were considered; the best came from FMC Corporation of San Jose, California. On August 6, 1965, Gunderson became a wholly owned subsidiary of FMC's Ordnance Division. The price was a little more than $6 million. Chet Gunderson retired the same day, and Al Gunderson became president of the new FMC subsidiary. Robert E. Gunderson, Al's son, became general manager.

Robert E. Gunderson

In the middle of the sale and transition, business and building continued as usual. The company built 2,314 railcars, 7 barges and 2 ship hulls and completed a barge conversion. During this time, C. Bruce Ward came on board. Al Gunderson wanted Ward to be sales manager, but Ward said he would rather go into shop management for two to three months. Ward explained, "If I'm going to sell something, I'd like to know something about it." So Ward got some overalls and a brown bag and spent two months working in the shop.

In 1966, Ward brought aboard William R. Galbraith to help cover sales. In early 1967, Galbraith became sales manager.

Then 1967 brought another series of changes. Al's son, Bob, had been with Gunderson since he was a teen-ager, starting as an office boy and janitor. He continued working every summer through his graduation from Stanford University, then came aboard full time, working at 14th & Everett. After time out for military service in the 1950s, he returned and began to shine in sales, advancing to general manager in 1965.

During a sales trip on January 19, 1967, Bob and his pilot took off from San Francisco in a twin-engine plane. The pilot soon radioed that one engine had stopped and he needed to make an emergency landing. Radar contact was lost as the plane approached San Mateo Bridge. The wreckage was found in the bay; both men had died.

Bob Gunderson's death devastated his father. Al's dreams of his son taking over the business were shattered. Ward remembers that from that day, Al was never the same. Soon, FMC worried that Al was not doing well. The parent company sent someone to take over Bob Gunderson's duties, but personalities clashed and the replacement's tenure was short.

Several weeks after Bob Gunderson's death, the board appointed Ward vice president and general manager. An ailing Al Gunderson retired, and Ward became president on July 1, 1967.

CHAPTER FIFTEEN

Innovation

During the late 1960's, the company turned its attention to the changing business of supplying the rail industry, and it took part in many innovations in car construction.

When Gunderson began building railcars, most cars were constructed of steel fastened together with rivets. The riveting process involved four men: One man watched the rivet-heating furnace and used tongs to pick up a red-hot rivet and toss it to a second man, who would catch it in a conical funnel. This man dumped the rivet on the floor. Another man, again with tongs, picked it up and inserted it into a rivet hole and, with a pneumatic rivet gun, hammer-compressed the rivet into its place in the steel car structure. The fourth man used a backup tool on the opposite side of the hole to apply opposing pressure on the rivet, ensuring a tight fit.

The men worked rapidly, and it was an intriguing process to watch. It also was tedious and hazardous to the people involved and those working nearby.

Gunderson worked to get its customers to accept welded construction, which would reduce labor costs. After several convincing tests and much effort by Gunderson engineers, sales people, and top management, one rail customer permitted the welding of side posts and other parts of the car. 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 workplace, innovatively reducing costs, and becoming more competitive.

Company employees were then, and are now, constantly searching for other ways to improve the process. Early on there were problems with freight damage to inbound materials. The one-piece roof shipments would vibrate, cracking the steel. The freight car axles — shipped on pallets — would shift in transit, resulting in damage to the machined surfaces. If a damaged component couldn't be repaired, it had to be replaced.

One by one, more components were made in-house, and costs declined.

The first several hundred cars for hauling wood chips had sides and ends of waterproofed plywood sheathing. But the plywood needed to be replaced often, and the cars needed a heavy truss frame to support the wooden sides. It wasn't the best design, but the Western railroads received enormous amounts of traffic revenue from the lumber mills in Oregon, Washington and California, and these mills played their leverage to the hilt, demanding that their products be used in car construction wherever possible.

But, steel companies also shipped large amounts 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. If Gunderson was to win its share of the market, a less-expensive

design was necessary. Thus, the all-steel wood chip car was designed and built in 1966. It was not only less expensive to build, it also was cheaper to maintain. The railroads liked the car, and not too many plywood-sheathed cars were built after that.

With each success, new opportunities presented themselves. Underframes generated orders for chip-hauling cars. These led to cars that hauled copper ore, cattle cars, general-purpose boxcars, covered hopper cars, coal cars, flatcars, mill gondola cars, and on and on. In 1973, Gunderson was elevated to divisional status and its name was changed to the Marine and Rail Equipment Division (MRED) of FMC Corporation.

Throughout the 1970s, demand for freight cars grew. By the mid-1970s, 19 railcar builders were operating. By 1978, national annual production of railcars topped 90,000. More-modern and larger boxcars were replacing thousands of smaller, worn-out cars as they were scrapped.

The 1970s also brought a boom in railcar leasing, which meant more business for car builders. Tax laws and other conditions made it attractive to invest in railcars for leasing, and several companies jumped into the market. Even individual investors got into the game, putting up money to own part of a car. Bruce Ward remembers a friend calling to say, "I've got the opportunity to invest in a tanker car, and they'll put my wife's name on it!"

These investors banked on continued railcar demand. They needed lease revenue coming in to cover the loans on their railcars and the maintenance costs. The car needed to be in use or it would rack up storage fees. For several years, the demand was there.

MRED had a backlog of thousands of cars but didn't have sufficient supplies coming in a timely manner to maintain the needed pace of construction.

Freight car truck castings — which held the axles and wheels in place and formed the running gear of the car — were very scarce. The company's purchasing agents scoured Canada, Brazil, France, Great Britain, Japan, Mexico, South Africa, and Spain. They found foundries capable of providing the castings, but they weren't allowed to do so for U.S. consumption. Two U.S. foundries controlled those licenses. Although their own capacities were badly oversold, those two foundries stalled, blocking the expansion of the supplier market.

Finally, demand built to the point that the U.S. license-holders gave in and agreed to allow foreign makers to supply some castings. The MRED team ordered 1,000 car-sets of the castings from a Brazilian foundry, which finally had gotten certification from the Association of American Railroads. Even that wasn't enough, and the casting shortage intensified. It was a seller's market and resulted in purchasing agreements with another supplier that was reminiscent of highway robbery. MRED had no choice and signed on the dotted line.

This was 1979, and, in spite of the high-handed terms of such deals, things were beginning to pay off. The company completed a record 6,027 cars that year.

Then, in 1980, the economy slipped into recession. The result? Eleven thousand car orders were canceled. The company suddenly had noncancelable casting orders coming out of its corporate ears.

As business of all types declined across the nation, car loadings dropped. When a car was needed, the railroads used their own stock instead of using leased cars. Untold thousands of privately owned cars sat on railroad sidings. Storage charges shot up, and storage privileges became scarce. Suddenly, ownership of cars by leasing companies lost its luster.

During the worst part of that recession, hundreds of thousands of railcars sat idle across the nation, wherever used rail could be found. Bruce Ward recalls seeing the idled cars, "thousands and thousands all along the I-5 corridor."

With such an oversupply, the railroads weren't buying cars. To complicate matters, the company had materials and parts already on order that couldn't be canceled. Money was flowing out, but orders weren't coming in. MRED put its workers on A, B, C, and D classifications and tried to keep as many workers employed as possible. It released the classifications one by one as the market continued to soften. Bill Galbraith recalls that during the recession, the marine side kept the company working. One year saw more marine sales than rail.

The recession wasn't the only factor working to unsettle the rail industry. The railroads were consolidating. As a railroad bought out a competitor, it would halt new car orders until it could sort out the combined inventory and its needs. When railroads began buying again, they always started with locomotives, keeping the car builders waiting.

When it finally came time to order cars, all the builders were competing with one another to get the order. And as they started to build, they again competed with one another to get their hands on the needed parts.

Amid this upheaval came deregulation. The government got out of the business of regulating every detail of what railroads could charge for carrying freight. The new freedom to set rates helped the railroads fight back increasing competition from trucking. The jockeying for market share between rail and trucking took several years to settle out.

The numbers tell an eloquent story of those times: 1980 was to have been a year of 6,500 or more cars for MRED. Indeed, the orders were on hand, but when the bottom fell out, production dropped to 4,801. In 1981, it fell to 1,593; in 1982, it hit rock bottom. Only 25 cars were produced that year.

This precipitous decline had the company, so recently riding high, suddenly slogging through a swamp.

The men and women of Gunderson could have just given up. But they knew if they would just hang in there long enough, the sun would break through. It did. It took almost a decade, but it did.

CHAPTER SIXTEEN

New ideas, new methods

Just as the cyclical nature of the business changed the number of cars produced, it brought about changes in the kinds of cars made. Car builders were forced to lower their prices on existing conventional cars or create demand by designing cars with greater carrying capacity. Even the suppliers of railcar parts became more competitive, coming up with weight- and maintenance-saving products.

The wave of the future was containerization and intermodalism. Containerization meant making standardized shipping containers the bedrock of moving freight worldwide. Containers comfortably cross modes of transportation, and so are called intermodal. Their development meant that crews loading and unloading cargo from ships, boxcars, and trucks wouldn't have to deal with dozens of different shapes and sizes of cargo packaging. Ships could be designed to carry neatly stacked containers of uniform size; even railcars and trucks could be standardized and thus serve thousands of different freight-hauling needs, all in a few standard boxes!

During the 1970s Gunderson had introduced prototypes for several new cars, including a 100-ton covered hopper car (8,100 units sold) and a 100-ton high-side gondola car designed for rotary coal dumping service (729 units sold in a single year).

At the start of the 1980s, the company began looking at a new design. This car would be intermodal — it would haul highway truck trailers piggyback on its deck. Originally it was introduced by the Atchison, Topeka & Santa Fe Railroad. Itel Corporation, a freight car leasing concern, bought the patent and came to MRED to have it redesigned and built.

These creations each had ten lightweight units, called platforms, semi-permanently linked to each other with articulating connectors that let the units follow the curves of the rails. This design became known as the Impack car, an Itel trade name, or 10-Pack. In a 10-Pack, only the ends of the first and tenth platforms required a standard set of four wheels. Each of the eight platforms in between those ends shared one set of wheels at the articulated connection. Fewer sets of wheels meant the 10-Pack was much lighter than 10 individual cars and thus saved fuel. Because the 10-Pack had fewer couplers and therefore less slack, longitudinal shocks from slack were reduced, protecting the cargo. The new design also reduced the rocking motion that occurs with conventional cars. Disconnecting the ten units was not necessary, except for repair or replacement; they were meant to travel as a group. Each unit could carry a 40- or 45-foot trailer.

Weight savings are magic words to the transportation industry. Railcar weight is dead weight. Reduce it, and you get lower fuel costs for the same freight income. That means more profit.

MRED built 704 of these multi-unit platforms for Itel between 1981 and 1984, but a new development, double-stack cars, killed the demand.

The double-stack car would be the wave of the future. By lowering the floor of the railcar, two shipping containers could be stacked where only one went before, so the cars could carry double the freight in the same space. They were billed as simpler, faster, and safer to load and unload. They required less track space and fewer cranes. They allowed a shorter train length, which improved braking efficiency.

The double-stack concept was developed by Southern Pacific and Sea-Land, and the first small group of cars was built by ACF. The cars, about 100 of them, went into service in the 1970s but never made much of an impact. Maybe the time just wasn't right.

A few years later, Thrall Car took a license from the Budd Company, which had developed a car with a depressed well for hauling truck trailers. Thrall modified the design to accommodate shipping containers stacked one atop another.

About this time, Dave DeBoer and Bob Yates left Southern Pacific Railroad to work for Greenbrier Leasing Corporation, at that time a transportation-based leasing and management company. Deboer and Yates had been involved in the original double-stack car and thought the cars had a future, although Southern Pacific had soured on the concept. Bill Furman, Greenbrier's president, also saw a future in the cars, and the three men set out to come up with a design.

A very light weight articulated car for carrying highway trailers, developed by Santa Fe railroad in the 1970s, was licensed to ITEL Corporation under the name "Impack" and built by the plant during FMC's ownership.

Furman was an alumnus of FMC Corporation, the parent company of MRED, having run is finance division in the early 1970s. Furman and Alan James had purchased Greenbrier in 1981 and had increased its lease fleet from 300 in 1981 to almost 3,000 cars in 1984. Now they were ready to try their hand at "sponsoring" a new car design as Itel had done with the earlier intermodal Impack car.

Furman approached Bill Galbraith, vice president for marketing, sales and engineering at MRED. James and Furman had done business with Galbraith before, buying and leasing boxcars in the 1970s. Together, the three men had engineered the first transactions in Gunderson's history where freight cars were manufactured in Portland,

Twin-Stack was the first of a long series of double stack cars marketed by Greenbrier and built at Gunderson.

and shipped to the East Coast – two large boxcar orders with the Maine Central Railroad. Now Furman proposed a new deal: Greenbrier would put up half the money to create a new double-stack car, to be called the Twin-Stack. It would have lower maintenance costs than the Thrall car and be durable for long life in a lease fleet. Greenbrier would define what the car needed to look like commercially. MRED would engineer it and finance half the development work. The two companies would split the profits from the car 50-50, but Greenbrier would hold exclusive marketing rights to the car, making all commercial decisions and financing the cost of marketing.

John E. Carroll Jr., who was running MRED, got the parent corporation's approval and backing to build the prototype in a joint undertaking, and a new era in intermodal transportation was begun.