

Empire Electronics

Paying close attention to detail – every detail

By Fred Noer

Anyone in the wiring harness industry seeking a growth-oriented formula for operating a harness manufacturing company would do well to notice the accomplishments of Empire Electronics in Troy, Mich., a northern Detroit suburb.



Steve Doman, Chairman and CEO of Empire Electronics

Besides making cable assemblies and printed circuit boards, Empire primarily manufactures wiring harnesses for the automobile industry. The harnesses are used for engine systems, air bags, navigation, headlights, taillights, headlights pedal assemblies, fuel systems, front-end modules, park assist and steering assemblies.

Among 20 active customers, GM is the firm's No. 1 client, followed by Chrysler and Ford. Work also is done for Toyota and Honda. Empire, a tier-two

supplier, has more than 250 production jobs and ships more than 18 million parts annually.

In the last four years the company has increased its sales 360 percent. No, that is not a typographical error. In 2001 Empire had sales of \$10 million, and the figure for last year was \$36 million. If the firm meets its 2005 projection of \$45 million, sales will have doubled twice in five years.

According to Steve Doman, 44, chairman, CEO and sole owner, those numbers could increase for 2006. He forecasted growth between 35 and 75 percent.

How does Empire make such stunning progress? By paying close attention to detail – every detail. All the time. “We break down everything in every operation, and I mean everything,” Doman said. “That’s what has allowed us to stay on top of our costs. And whatever our cost is, it is never good enough. You’ve heard of a continuous improvement program. Well, we’re on a continuous, continuous improvement program.

“Making harnesses is a brutal industry, so we must watch our pennies, or we will end up digging our grave,” Doman said. “The automotive industry has become downright ruthless. Buyers play two competitors’ prices off each other and keep pushing for every last cent until someone bails out or draws a line in the sand.”

Growth also results from aggressiveness and dedication to quality. Last year 64 part numbers were launched, with each one Empire passed the production parts approval process the first time. The defect rate is less than 25 parts per million, largely due to Empire’s world-class quality system, which utilizes poke yokes extensively throughout assembly.



Connectors are placed in testing fixtures during assembly. This is an example of a poke yoke system.

Empire is one of the few automotive suppliers with full TS certification. They received QS certification in less than two years after production began in Honduras in 1997, and have been ISO/TS 16949:2002 certified for the last two years. The company has also earned quality awards from Ford, Visteon and TRW. The latest one was in early June from Takata Petri, a division of Takata Corp., a tier-one automotive supplier.

The Empire business approach reflects Doman’s education, experience and personality. A lifelong Detroit-area resident, he has an accounting degree from Wayne State University in Detroit and an MBA in production management and finance from the University of Detroit.

Prior to being hired as Empire president in 1989, Doman worked at Ultra Manufacturing, a stamping company in Auburn Hills, Mich., another Detroit suburb. When he arrived, the plant was close to being shuttered. He was given a deadline to turn around the company. He did, and eventually it was sold for a profit.

Doman was given the same ultimatum at Empire. It was started in nearby Clawson, Mich., in 1981 as an electronics component distribution company and in eight years was doing \$1.5 million in business, including wiring harness manufacturing. But, in the month prior to Doman’s arrival the firm lost \$53,300. He was given three months to stop the bleeding, and his managerial surgery succeeded.

In 1993 Doman bought the business, and he decided to have Empire drop distribution and concentrate on manufacturing. “We were trying to be all things to all customers. We had to figure out what we do best,” he said.

A few years later Empire grew to a staff of 120 people making automotive harnesses in two buildings in Troy, but Doman realized production would have to be sent to Mexico to remain competitive. That conclusion was underscored in 1996 when a customer shifted its Taurus and Sable harness work south of the border, costing Empire its largest order and 10 percent of its business.

“That was my wake-up call,” Doman said. “At a board meeting I said the situation was good and bad. We can stay a small company and never get any bigger, or we can step out and see what we can become. I took the attitude that if we were going down, we were going to go down fighting.”

But, Empire did not open a plant in Mexico (or India, which was under consideration). Instead, the firm went to San Pedro Sula, Honduras. Doman related all the arrangements for a Mexico operation had been made, but at the last minute he decided to follow a colleague’s advice and investigate Honduras.

“I was always told that if you’re going to survive in the auto industry, Mexico is where you’ve got to be,” Doman said. “I spent 30 days in different parts of Mexico, and the whole time I felt like I



Potting/sealing of sockets. Empire Electronics is the leading supplier in the automotive lighting arena for potted sockets.



Dimension inspection is a critical aspect in the quality control of wiring harnesses.



**Alfredo Gabriele, Plant Manager,
Empire Electronics**

was being pushed into a corner. I was only in Honduras three days, and I knew that if I was going to take the risk, I wanted to put my money there."

Doman went against conventional wisdom in another way. People told him his company was too small (\$5 million in sales at the time), but he reasoned its low debt made the move possible. Manufacturing in Honduras began in January 1997 in a 30,000-square-foot building, and within a year all production was there.

Today, 1,400 people work in a leased 200,000-square-foot Honduras plant. Soon the space will be increased by 40 percent and 400 more employees will be hired. Over the next 1-2 years Empire will buy land there and erect a new building.

"The philosophy I have about setting up offshore is that the more involved you are with understanding the culture and the country, the odds go up of succeeding," Doman said. "We seriously embraced the people, the culture and the country."

Doman pointed out Honduras is a good compromise between Mexico and China, calling the latter Empire's foremost competitor. He acknowledged hourly wages in Honduras are less than Mexico and more than China, but "a lot of the information about labor costs is not sound because it doesn't include the variable costs in labor costs.

"It's all about operation efficiency. What we give away in labor costs, we make up in efficiency," Doman said. "We win eight out of 10 jobs when we go head to head with Chinese companies. One thing I'm most proud of is that 100 percent of the time a prospective

customer comes to our Honduras facility to evaluate us, they give us business. It's a real show place." Calling Honduras a "right shore" or "near shore" alternative to China, the Empire Web site delineates the differences between the two countries: The time difference is one hour versus 13 hours, air travel time is five hours versus 24 hours, and shipping takes six days versus 5-6 weeks.

Product quality has been maintained in Honduras due to continuous improvement programs, low worker turnover, and the presence of 50 engineers. About technology, Empire has used voice-over-Internet protocol (VOIP) since 1997 to communicate between Troy and Honduras in real time. According to president Ed Doman, VOIP has meant a 50-60 percent cost savings.

Two significant processes in Honduras are urethane potting and plastic injection molding. A patent is pending on the potting due to a unique process in a clean room with controlled temperature and humidity.

"We've made millions of lighting sockets and connectors using similar machines as other companies, but it's our own system and how we integrate everything that make the difference," Ed Doman said. "We segregate the process so it's not exposed to the elements of the rest of the factory."

Molding was begun after an analysis revealed plastic components comprised 70-80 percent of Empire's material costs. "We started making our own plastic components seven years ago, but in the last two years we've really accelerated that process," Steve Doman said.

Some customers help pay the tooling costs, but more often Empire has to make the investment. Doman used that as an example of sharp financial management as key to Empire's growth – and the success of any harness company.

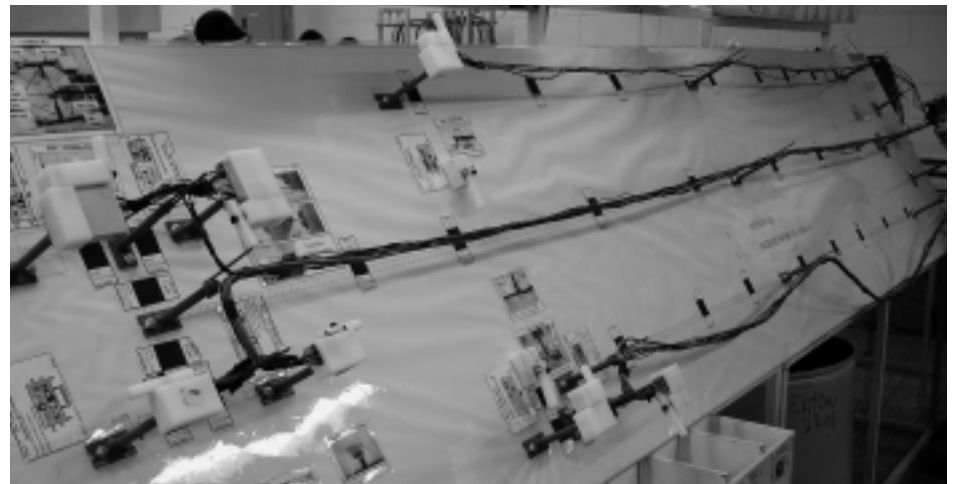
"You must have cash today. Having a healthy balance sheet is critical to survive in today's environment," he said. "You can grow faster through acquisitions, but it is an unnatural growth process because your balance sheet takes a kick. Your debt-to-equity ratios go out of whack.

"We chose to grow naturally, so we have a stronger balance sheet, and we can make investments in tool and die and other equipment," Doman said. "That's why we have staying power."

Strong financials also will enable Empire and other companies to weather



Continuity testing is a critical part of Empire's "quality net" area.



Rear Seat Entertainment Harness

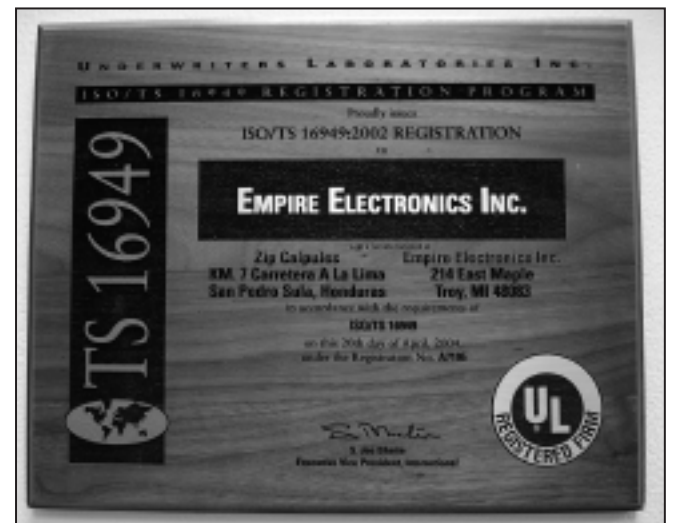
the economic storms ahead. Doman reported the Original Equipment Suppliers Association has predicted in the next five years more than 4,000 tier-two and tier-three companies will go out of business through acquisition or bankruptcy.

"There are doomsday predictions for the auto industry due to cost pressure, so you better have your balance sheet in order," Doman said. "You can bust your tail and then customers file bankruptcy. What do you do with all those receivables? The strength of your company is a major factor of how many hits you can withstand.

To maintain a progressive attitude at Empire, Doman termed the company culture "high spirited. We have a very strong morale, and we don't put up with negativism. Teamwork is at the center of all our activities," he said. "There are no dictators. We have to work together to survive. I really listen and put a lot of faith in the people I work with. I'm only as good as the people I am surrounded with.

"I love coming to work every day, and I love the people I work with," he said. "I love the challenge of the business. It's not easy, and sometimes it gets frustrating. It's tough to make it in the auto industry, but the tough part makes it great."

Meeting the challenges is done by goal orientation, Doman stated. "Corporate goals are not any good unless they are sent all the way down to each individual, who must have goals,



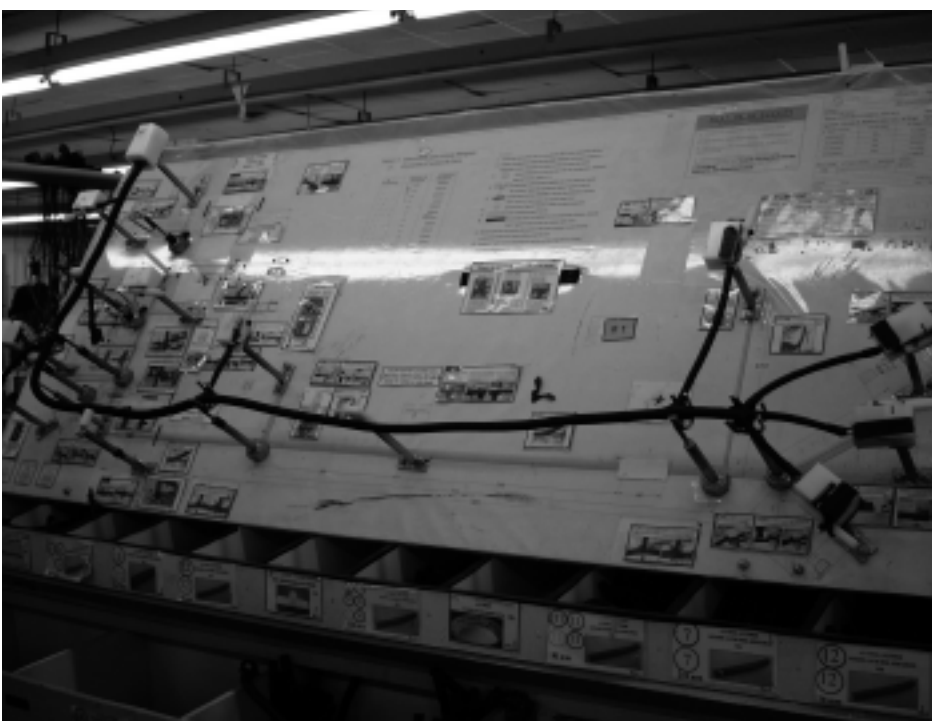
Empire Electronics has been ISO/TS 16949:2002 for the last two years.

too," he said. "Our mentality is that we can always improve by doing a job better today than yesterday. If you don't have that attitude, why would you want to come to work?"

Besides Doman and his brother Ed, guiding the company and its employees toward their goals are brothers Ken, chief financial officer, and Bill, chief engineer. They work in the Troy office, a 40,000-square-foot facility constructed two years ago.

In 1-2 years the building will be expanded by 30,000 square feet. The office is for the administrative, sales, marketing, project management, engineering, quality, accounting and human resources departments that are staffed by 50 persons. Warehousing and limited production also are in the building.

More information is available at: Empire Electronics, 214 E. Maple St., Troy, MI 48083. The phone number is 248-585-8130, fax is 248-585-3686, and e-mail is cbupte@empireelect.com. The Web address is www.empireelectronics.com.



Front End Module Harness on a rotary board during assembly