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New metal fabrication player touts high-value engineering

Small fabricator forms design partnerships to compete globally

By **Tim Heston**

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A Baltimore job shop remained on the growth path throughout the recession by circumventing the traditional job bidding process and gaining a serious foothold in the export market.

In 1990 Drew Greenblatt probably couldn't have imagined he'd be sitting before [congressional hearings](#) opining the virtues of U.S. manufacturing. The [president of Marlin Steel Wire Products](#) has testified that small manufacturing companies like his can generate jobs by designing and manufacturing products here and exporting them. His 29-employee shop has done just that, [sending its wire and sheet metal products to more than 30 countries, including China.](#)



In 1990, though, he had just been laid off from a bank, his first job out of college. That's not your usual stepping stone to success in metal fabrication. But then again, Greenblatt isn't your usual business owner.

The self-described serial entrepreneur didn't hesitate telling the story—no sighs of regret, no shaking of the head. He just dove into the bleak narrative with gusto. An optimist with a voice implying Energizer-bunny tenacity, Greenblatt recalled unemployment as “the best thing that ever happened to me. I don't have the chemistry to be a banker.”

After earning his M.B.A. in finance in 1991, he started interviewing at Exxon and other Fortune 100 companies—and had a revelation. He realized that the corporate world just wasn't in his blood. It was too slow-moving, too risk-averse. Soon after he learned about a security company for sale in his hometown of Bethesda, Md., outside Washington, D.C. “It was a little thing, run out of somebody's garage, with no employees.”

Though loaded already with student debt, Greenblatt borrowed money and bought the company—a not-so-risk-averse thing to do. But within a few years Greenblatt increased the security company's sales three and a half times, and sold the firm for five times the amount he bought it for. "It was a great deal. I didn't make enough to retire, but I had a nice little war chest building," he recalled, "so I started looking for companies."

Entrepreneurism, it seems, was still in his blood. After a few failed attempts, he finally found Marlin Steel Wire Products, a wire form contract manufacturer "in the worst section of Brooklyn [New York] you could imagine," he said. The company had 1950s-vintage machine tools. Every employee, save the office manager and bookkeeper, made minimum wage. The company sold bagel baskets, and in that world "precision" was anything less than ± 1 inch. The most modern machine in the building was a recently purchased fax machine, the company's first.

Despite all this, Marlin was profitable. Greenblatt figured that if the company could be profitable with old machines and minimum-wage workers, it had potential.

Employees actually didn't work with blueprints; many couldn't read them. If customers reordered products, they would send Marlin the basket, and workers would simply copy it. "That was the level of their engineering prowess," he chuckled. "And yes, that's what I bought."

Greenblatt set out to turn things around. He purchased the firm in March 1998, and by September he started moving operations to Baltimore. He hired workers, bought equipment, transferred down a portion of the existing staff to the new facility, and by February 1999 shut down the old Brooklyn shop.

Marlin increased on-time delivery, and an already profitable business became even more profitable. Still, all the customer service and quick response in the world couldn't hide the fact that Marlin made a commodity product, so it was little wonder foreign competition eventually swooped in. At one point, a Chinese firm shipped bagel baskets into Manhattan for less than it cost Marlin just to buy the material. At the same time, the bagel market started to contract, thanks to the Atkins™ diet that reduced our appetite for starch. It was a one-two punch.

"We almost went out of business. We were toast," he recalled, apparently with no pun intended. "We had old equipment, and we were losing major money."

But then an [engineer from Boeing called and made an unusual request: He needed a small batch of wire baskets for assembly operations](#). He wanted ± 0.063 in., a tight tolerance for the wire world and incredibly precise compared to bagel baskets. Greenblatt knew the product would take extra work, so he quoted triple the per-piece price he charged for his bread-and-bagel (so to speak) business. Boeing accepted.

At that point Greenblatt had an epiphany: People are willing to pay for good quality and fast turnaround. More than that, if Marlin could add value—really get to know customer problems and develop solutions—the company could be stronger. He realized that many manufacturers may be expert in designing and manufacturing their own products, but they might benefit from a fresh approach to their material handling options, made possible by something they may not have thought of: a specially designed wire basket made just for their operation.

Today six of Marlin's 29 employees are designers or mechanical engineers, and with every order they attempt to design products to make customers' lives easier. In the past solutions involved primarily steel wire, but today the shop is selling both its wire and sheet metal cutting and forming capabilities (see **Figure 1** and **Figure 2**).

Getting into high-value products and away from commodities allowed Greenblatt to invest heavily in the business. During the past decade he poured several million dollars into [automated welding lines, 3-D and 2-D wire bending machines, an Amada press brake, and, most recently, a TRUMPF punch press](#). Using form tools and other specialized punches, Marlin now can bend flanges 1 in. high, create louvers, roll stiffening ribs, and perform thread tapping on the turret press, eliminating secondary operations.

This year the company made its first major inroad into sheet metal fabrication, and even as a new industry player was able to snag the Web site address, www.sheetmetalfabrication.com. It made the move because many wire clients began asking for [sheet metal components or assemblies involving both wire and sheet metal](#) (see **Figure 3**). Recent [sheet metal projects include containers designed to hold transmission components at General Motors assembly plants](#). The company has also done similar work for lines making the [Toyota Prius®](#).

The sheet metal arena is much larger than the wire market, and for this reason Greenblatt predicts metal fabrication becoming a dominant part of the business during the next few years. “We’re poised to be 50 percent sheet metal next year and then 60 to 70 percent sheet metal by 2012,” he said, adding that he’s counting on customers consolidating their vendor bases and “purging those who are one-trick ponies” or who deliver late.

Marlin has increased sales every year. When Greenblatt bought the firm in 1998, it employed 16 and had \$800,000 in annual revenue. In 2006 the company made \$1.6 million. And last year, during the depths of the Great Recession, Marlin had \$3.5 million in sales. Between 1998 and 2010, the staff grew by only a dozen, yet revenue more than quadrupled. Greenblatt added that the company has remained profitable and cash flow has improved, even during the downturn.

Exports Drive Growth

While the sluggish domestic market hasn’t been driving Marlin’s growth, exports have. This summer, for instance, [Marlin shipped products to Finland, Singapore, Switzerland, Denmark, Australia, and even China](#). All told, more than 25 percent of company sales come from overseas. “The export market is intrinsic to our future growth,” Greenblatt said. “The domestic market is growing for us, but it’s nothing compared to how big the export market is for us. It’s wonderful that Australian money is keeping people employed in Baltimore.”

Greenblatt has gone to Capitol Hill to give testimony on behalf of the [National Association of Manufacturers and, most recently, the U.S. Chamber of Commerce](#). In [April he gave testimony on the virtues and opportunities of free trade](#). Marlin seems to be proof that even a small U.S. manufacturer can thrive during tough times by making locally and selling globally.

Employee Incentives

How has Marlin accomplished this? Greenblatt named several reasons, including fast lead-times. The company can turn around products in days. Machines are grouped together in cells designed to produce a range of products sharing certain common attributes. At each cell are teams of workers.



As Greenblatt explained, he strives to create a business environment in which everyone has an eye on quality and throughput. To that end, he developed a cash-based employee incentive program: If workers produce parts that exceed quality standards and meet throughput goals for a week, they receive a significant cash bonus, often several hundred dollars' worth—and this is every week.

"I'm not the only entrepreneur in the factory," he said. "Each cell has a target, and the employees in each cell are extremely motivated to hit their numbers."

He conceded the system isn't perfect—no incentive program is—but he made sure to design it so that the employee has control over whether he earns extra cash or not. "In my opinion, that's better than giving out bonuses if the overall company is doing well." A single employee doesn't have complete control over sales and profits for the entire company. "It's unfair to employees, so they don't become engaged in the bonus program. If they get it, they're happy. But they still don't have any skin in the game.

"But the way we've structured the program, employees in every cell actually have complete control as to whether they get the money this week or not. It's very motivational, and it's part of the reason why we've been so productive."

Such an environment requires all employees to think continually about better ways to get more accomplished, and more education can help. If employees attend a local college to further their technical education, they are fully reimbursed for all tuition and related fees if they achieve a B+ average or better—and that benefit has continued throughout the recession.

Good Engineering, Global Reach

Of course, how viable is such a program if work isn't coming in the door? Moreover, quick turnaround and quality parts can't drive so much export business on their own. Lightning-fast manufacturing time doesn't count for as much when a product sits on a boat for weeks on its way to Australia. To sell abroad, there has to be something more. This is where Marlin's engineering and design come into play.

As Greenblatt put it, "We don't go out and bid with dozens of other shops, and the one who makes the mistake on the Excel spreadsheet wins the job."

The company's six mechanical engineers carry out a consultative sales process that aims to uncover new areas where Marlin can provide value. Those at an automotive, aerospace, or heavy-equipment plant may be absolute experts at designing, machining, fabricating, and assembling products. But they may not have thought about how a wire or sheet metal container can be designed in such a way to save the OEM millions in material handling costs over several years.

Like anything else these days, design needs to be quick. In the summer, for instance, a major OEM requested a series of sheet metal containers from Marlin one Monday. On Tuesday afternoon, Marlin engineers visited the customer plant to brainstorm ideas. By Thursday morning, the design was finalized, and Marlin shipped the order the next week.

Engineers get a lot accomplished in that time. "We probe," Greenblatt said. "What's the fit, form, and function of all this? What are you trying to accomplish—and not just this process, but the process before and after this? So we really get a lay of the land when it comes to a customer's part flow. Then we come up with suggestions, draw it out, and demonstrate that this specific container or basket actually can hold parts and articulate them in a way so they can run the processes faster. Or we can design a container in a way that we can squeeze in more parts; all of a sudden your heat-treat line is 40 percent more efficient. Then the choke point moves somewhere else in the factory, and that means you may not need to run the

heat-treat line at night anymore. So those three guys who were making \$25 an hour working the night shift can be taken to the day shift and moved somewhere else. All this happens because our [material handling] container is optimized.”

He conceded that to dream up such strategies and communicate them well requires a mechanical engineer or designer who may be a rare find, and to attract such talent requires competitive compensation. “But the benefits to the customers are so massive. Our containers pay for themselves in a few days or weeks. That’s how we win jobs.”

<http://www.thefabricator.com/article/fabstories/new-metal-fabrication-player-touts-high-value-engineering>



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