

What economic downturn?

E&E Metal Fab Inc., Lebanon, Pa., proves that properly motivated employees and quality workmanship conquer all



the fabricator

February 2009

www.thefabricator.com

The foremost authority on metal fabricating technology

 The official publication of the Fabricators & Manufacturers Association, Intl.



The FABRICATOR's 2009
Industry Award winner:
Shickel Corp.



Not all employees share the last name, but they do well in representing the best of

Shickel Corp.,

The FABRICATOR's 2009 Industry Award winner

Company Profile

By Dan Davis, Editor-in-Chief

“There are a lot of new faces around here. I don't think I know some of these people's names,” said Mark Shickel, vice president, engineering, Shickel Corp., as the company's approximately 100 employees gathered for a picture.

It's not surprising. The \$12-million-a-year company has grown rapidly in recent years—17 percent in 2006, 13 percent in 2007, and 28 percent in 2008—and profit margins have improved steadily from 2003 to 2006 and remained level from 2006 to 2008. Shickel Corp. is currently hiring people to keep up with new jobs, many of which are

◀ *Shickel Corp. is no longer the small repair shop that opened in 1938 in Bridgewater, Va. It's a business with more than 100 employees and \$12 million in annual sales. Photos courtesy of Rodney W. Good, Artistic Photography*

in its home base in the Shenandoah Valley in Virginia. New faces and new places—that describes life at this Bridgewater, Va., metal fabricating shop.

But this is no new kid on the block. This is a 70-year-old family affair that counts all employees as long-lost cousins, even if they don't share the Shickel DNA.

Now with the third generation of Shickels heavily involved in the day-to-day operations, Shickel Corp. is trying to strike a balance between being an aggressive and innovative company and a business where everyone feels they can have their say and trust that they are being listened to, not just heard. It's a balancing act that many companies are faced with, but many family-owned companies don't have to worry about it, because about a third of family businesses fail after the second generation takes over.

That's not the case with Shickel Corp. The company has diversified its customer base and identified areas for business growth. It has adopted new information technology tools and fabricating equipment, but still relies on old-fashioned principles and hard work. It's a company that

can't be easily mimicked because of its history and employee skill set.

For those reasons and more, Shickel Corp. is the recipient of *The FABRICATOR's* 2009 Industry Award.

"About everything we do is custom. We do very little [contract] manufacturing."

That's the viewpoint of Helen Shickel, company president, historian, and daughter-in-law of John Shickel, who purchased interest in a repair shop in Bridgewater, Va., in 1938. That business approach has kept the company from being easily pegged as one type of business. It's ingrained in the company's history.

From 1938 to the mid-1950s, it was primarily a repair shop for farmers and the nearby railroads. When Helen and her husband, Carlton Shickel, purchased the business in 1956, the company expanded its repair business to include heavy-duty construction equipment and added machining capabilities. In the 1960s company welders hit the road to do more field repair work in the region's farms, mills, and plants. In the 1970s the company added sheet metal fabricating equipment and expanded its manufacturing offerings again. When the poultry processing industry exploded in the 1980s and 1990s, the company jumped into stainless steel fabricating and earned a reputation for excellent work and knowledgeable design.

That manufacturing legacy heavily influences the company's current mix of customers:

- Today stainless steel product design, fabrication, and installation represent about half of the company's business, according to Gary Shickel, vice president, operations. Shickel Corp. gained its experience in this field by fabricating stainless steel conveyors and platforms and repairing machinery for the nearby food processing industry, but nowadays much of its work is for pharmaceutical companies. Along the way, it also has become adept at



▲ *Stainless steel fabricating—whether fabricating stainless steel countertops or gas tungsten arc welding for smaller projects—has emerged as one of the most important operations of Shickel Corp.'s overall business.*

stainless steel polishing and has offered passivating services for more than 10 years. Its reputation crosses U.S. borders with the export of stainless steel products to pharmaceutical companies in Singapore, Ireland, Italy, and Spain.

- "I wouldn't call us a structural steel fabricator, but we fabricate a lot of structural parts," Mark Shickel said. Technically, Shickel Corp. fabricates structural parts for construction projects and handles many of the installations. An example of this type of job was the installation of second-floor structural beams to support added weight of the upper floor of a renovated bank building in Washington, D.C. Shickel Corp. employees handled all aspects of the installation, except for the crane work. The construction segment of the company's business has grown simply by word-of-mouth over the past several years—increasing from \$1.5 million in 2005 to \$5 million in 2007.

- Admittedly, specialty fabrications for museums are not a huge portion of Shickel Corp.'s overall business, but they might be the most high-profile. In 1993 the company's craftsmen refurbished a 1950s-era bomb shel-



"Between our craftsmen and all of the experience here, we think we can figure out anything."

—Mark Shickel



▲ Another large portion of Shickel Corp.'s business is fabricating components and installing them as well. These stairs are destined for a food processing plant.

ter for a Washington, D.C., museum, and that job has led to many others. It has fabricated and installed a full-size replica of a Chicago elevated track station for a historical museum there; a 12-foot-tall basketball hoop made of steel pipes for a Kansas City, Mo., basketball museum; a stainless steel display tank for a squid at a Washington, D.C., science museum; and an 1800s-era, wind-powered engine that was fabricated solely based on old photographs, deteriorated cast-iron artifacts, and some old-fashioned sleuthing. Based on that resume, Shickel Corp. has partnered with a museum exhibit design company, which outsources its large fabrication projects to it.

- Like any other fabricating shop, Shickel Corp. fabricates a variety of parts for its OEM customers. To meet customers' requirements over the years, the company has relied on its machining capabilities, complete with CNC mills and a CNC lathe, and its fabricating offerings, which include a 6- by 16-foot MG Industries plasma cutting table with both a conventional plasma power source for cutting material up to 2 in. thick and a Hypertherm 75-amp, high-definition power source for high-tolerance cuts. But it hasn't been afraid to add capabilities to keep up with changing demands, such as powder coating; waterjet cutting on a 6- by 12-foot Calypso table powered by a 60,000-PSI KMT pump; CNC turning on a Daewoo Puma mill turning center; and polishing with a Kuhlmeier twin-belt polishing machine.

"I think where we shine is where it gets a little bizarre," Mark Shickel said. That's not a corporate slogan, but it's a nice summary of Shickel Corp.'s capabilities. Its design engi-

neers like a challenge that others may turn away, and the company can see a project all the way through, from design to fabricating to finishing to installation, if necessary.

"We are a relationship company. It's not always about the bottom-line contract."

Gary Shickel's comment is backed up by the company's structure. Don Crawford, Shickel Corp.'s sales manager, brings in new business, and a project manager takes over the project. That project manager is the day-to-day contact for the customer and is intimately involved in all stages of the job. The project manager ensures the job is delivered on time, within budget, and done in a quality manner. He might work on a few very large projects during the year or as many as 100 smaller jobs over a 12-month time frame.

"In some cases, we use the same project manager for one company," Helen Shickel said. "Most of the things that company wants done, it will work through that one project manager."

The project managers, who come from a pool of 19 engineering and sales professionals, interact internally with Shickel Corp. support personnel to ensure manufacturing resources are used efficiently and that jobs can proceed simultaneously through the 50,000 square feet of the three-building campus. Project managers routinely update department managers for steel fabrication, stainless steel fabrication, field service, and the master scheduler—who all happen to share one office—and let them know of potential job changes.

Mark Shickel said the company has added resources to assist with estimating so that project managers can spend more time on customer issues, not just responding to exploratory requests. The belief, he added, is that this leads to better customer service.

Shickel Corp. takes pride in responding to customer requests, whether it's a design request that starts on a crumpled sheet of paper or turning a fabricating job around in a matter of days. Gary Shickel pointed to its powder coating operation—an ITW Gema application system, a booth, a three-stage pretreatment system, and 13- by 18- by 8.5-ft. oven—in Building No. 3 as an example of how Shickel Corp. is willing to invest in itself to respond to a customer request. In that particular case, the customer wanted an extra-durable finish on the carbon steel part that Shickel Corp. fabricated for it.

"We are all Shickels."

Gary Shickel stressed that point. That doesn't go for just the project managers; that goes for everyone in the company.

"One of the things that I say in orientation when we hire new people is that you are Shickels to the customer," Gary Shickel said. "They are going to have much more contact with the customer than I'll have—whether it's face-to-face communication or the actual product they are turning out. [Customers] are going to look, and they are going to think 'Shickel.'"



▲ An example of a stainless steel product that Shickel Corp. was contracted to fabricate is this sterilizing cabinet for an institutional laboratory. Employees fabricated the base and other components and then went to the customer's facility for on-site fit-up with the company's engineers. With tack welds holding the sterilizer components in place, a Shickel representative took it back to the shop for final assembly and finishing.

Reinvesting in Manufacturing

Shickel Corp., Bridgewater, Va., has state-approved apprenticeship programs and actively takes interns from James Madison University, Harrisonburg, Va., and Virginia Polytechnic Institute and State University, Blacksburg, Va., but that's not where its support of manufacturing ends.

The company is active with local high schools. Shickel Corp. staff members often act as mentors to visiting students exploring possible careers in engineering. Under cooperative education programs with nearby institutions, students in welding programs work part-time in the afternoon in the company's fabricating areas.

Shickel Corp. participates in a local Tech Prep Consortium, which

underwrites and sponsors summer programs for middle school and high school students looking to explore technical areas of study. The summer programs take place at Blue Ridge Community College in Weyers Cave, Va.

The company regularly welcomes school groups to visit and learn how their math and science lessons can be practically applied in the real world. During the summer, it hosts teachers and counselors as part of local school districts' summer enhancement programs.

The community activity is not just good for manufacturing as a whole, but it's paying dividends for the company as well. Word is getting out that Shickel Corp. is a good place to work.

"We have good people, and they want to work with good people," said Jeff Stapel, Shickel Corp.'s human resources manager. "So they are referring the good people that they know."

The best way to keep employees engaged in their work is to keep the job from becoming boring. That's why Shickel Corp. encourages cross-training. For example, a gas tungsten arc welder in the stainless steel department might be operating the twin-belt polishing machine after he had joined up a countertop.

By having shop floor personnel knowledgeable about how to run several pieces of

CNC equipment, someone can step right in to help fill an absence. Shickel Corp. management also believes that this helps personnel become more informed about production processes, so they will be able to offer intelligent suggestions for efficiency improvements.

The company encourages development of professional skills, too, not just technical ones. Backed by those types of educational offerings, internal candidates for company

leadership have emerged and are now leading key departments.

Whereas other metal fabricating companies rely on local institutions to develop manufacturing talent, Shickel Corp. has embraced the task. It maintains formal apprenticeship programs in machining and fabricating that are approved by the Virginia Department of Labor and regularly administers its own welding certification tests under the R stamp program, which it still carries despite the fact that boiler and pressure vessel repair work hasn't been a major part of the company's business portfolio since the late 1990s.

Company management views safety as another necessary investment in its work force. That means a monthly companywide safety meeting, as much as 20 hours in safety training for new employees, and a safety incentive program that pays each employee \$100 each quarter if the company does not record an OSHA-defined injury during that same time.

Shickel Corp. has participated in an OSHA voluntary compliance safety and health achievement recognition program since 1999. Under this program, it actually invites regulatory personnel into its shop every two years for inspection and constructive criticism. Despite what might look like a burden, the company embraces the scrutiny.

"It keeps us on our toes, and it gives us accountability," said Jeff Stapel, human resources manager. "And they are there to answer questions because regulations are always changing."

Gary Shickel added that a safe work force is not just the moral thing to do, but it makes sense from a business standpoint. In some instances, a shoddy safety record could prevent the company from winning jobs where the safety performance of contracting companies is as important as the contractor's bid price and skill set.

"The emphasis has always been on quality. We heard it from our dad. He always said do it right and do it with integrity." —Gary Shickel





▲ Even though Shickel Corp. started as a metal repair shop and continued to do repairs throughout its history, it doesn't do a large business repairing parts anymore. However, if a bucket for a front-loader is dropped off and someone is available for a job, the company won't turn the customer away.



▲ Instead of continuing to send out parts to be laser-cut, Shickel Corp. invested in a Calypso Hammer-Head waterjet with a KMT Streamline™ SL-V 60 Plus pump in 2005 for high-tolerance cutting. The company runs the dual-head table, which delivers 60,000 PSI of cutting power, a shift and a half each day.

Stapel said that the training programs and initiatives go a long way in promoting the company culture.

"Even though we have gotten a lot bigger over the last year or so, we still have people who feel they are part of an organization. Conscious efforts are made to try and keep that," he said.

"Information is key. In any business, information is power and knowledge."

That's a reminder from Gary Shickel that the company doesn't run successfully just because of solid relationships and warm-and-fuzzy human resources talk. The company has been an early adopter of information technology (IT), and it's helped to

keep everyone's focus on costs and, ultimately, profit.

In the mid-1990s the company had custom-written programs that kept track of some aspects of a job once it hit the shop floor. But the programs weren't integrated or sophisticated enough to deliver the real-time information that could really make a difference.

That changed with the adoption of an enterprise resource planning (ERP) software suite. It was the first step in tying all aspects of the business together and providing a window to view the daily financial health of the company.

"We were hungry for it. We just needed the information," said Gary Shickel.

Today the company uses Global Shop Solutions software to monitor shop floor and front-office activities. As jobs hit the shop floor, employees log into one of the 50 computers in Shickel Corp.'s network to notify the software system that work on a job is about to begin and which activity is being performed. The software keeps track of resources and material being used on the job and feeds the information to integrated software modules used for cost monitoring, payroll, general ledger, inventory control, receivables, and payables. Management can run reports to gauge company performance.

For instance, rework can be tracked because all such incidents are logged into the software system with a special code. Once recorded, rework incidents are investigated, and steps are taken, usually through team communication or process changes, to avoid similar occurrences. Management reports that such steps have helped to keep rework costs to less than 2 percent of sales each month.

When it comes to inventory, the ERP software has helped to minimize costs. Purchasers buy material only for scheduled jobs because they know what's on the schedule; they don't buy for inventory sake. If they do buy for inventory, the software gives them an idea of the minimum amount of in-house quantity and variety needed to complete smaller, recurring jobs. They can direct drops and extra materials back into inventory and other jobs, and the software gives them an idea of how the recycling is making an impact on the bottom line (more than \$50,000 in scrap receipts recorded in 2007).

"If you want entrepreneurs and have people to take ownership of what they are doing, they can check on how they are doing. They have a scorecard [because of the software]," Stapel said.

The ERP suite keeps track of certain quality metrics for managers. ISO 9001:2000 helps to ensure that those numbers continue to improve.

Shickel Corp. became ISO 9001:2000-compliant in 2003. The move helped to formalize quality procedures because ISO regulations require a company to document processes and chart how responses arise when quality infractions occur.

"It wasn't a cultural shift. It was more a move to better documentation," said Mark Shickel. "We have always stressed quality, and our customers have come to expect it."

Stapel said the quality system forced the company to come to grips with the fact that it was no longer the same small company that could get away with simply trusting people to know the right way to do things.

"It helped us change the way we do things and how we look at some things. It forces you to look at systems and processes," Stapel said. "There were some steps where we learned that we needed to communicate better, and the documentation trails now help us to communicate better to the person doing the work what the customer expects."

It's also helped customer relations. Now when larger OEM customers request information on Shickel Corp.'s quality efforts, the metal fabricator doesn't have to respond with a drawn-out explanation of quality efforts; the phrase "ISO-compliant"

"Even though we have gotten a lot bigger over the last year or so, we still have people who feel they are part of an organization."

Determining the Industry Award winner

Companies that entered *The FABRICATOR's* 2009 Industry Award competition were judged in three areas: operational improvements, impact on the marketplace, and contributions to the community.

In the field of operations, companies were asked to elaborate on steps taken to improve overall organizational efficiency. Examples of these efforts include implementation of lean techniques, equipment investment, employee training, and inventory reduction. Companies also were asked to cover aspects of their safety programs and successes they have achieved in preventing workplace accidents.

To gauge a company's impact on a marketplace, judges wanted to know how companies maintained and expanded business over the past year. Did companies enter new regional markets? Did they find luck serving new industry segments? Did shop floor improvements open the door to accommodate new business and welcome new customers?

Because society no longer embraces vocational education as strongly as it once did, supporting manufacturing as a career choice is a very important component of this award program. Companies were asked to describe their efforts in supporting nearby educational programs and welcoming the community into their facility. This not only covered monetary support and in-kind donations, but company personnel interaction with local educational officials and students.

The Fabricators & Manufacturers Association whittled down the many submissions to three finalists, and the Editorial Advisory Board for *The FABRICATOR* acted as the final judges. After reading each submission, Editorial Advisory Board members scored the companies in the three areas, with a maximum of 40 points for operational improvement, 40 points for marketplace success, and 20 points for community involvement. The points then were totaled, and the company with the most points was declared the winner.

For winning the 2009 Industry Award, Shickel Corp. won complimentary registration, travel, and hotel accommodations to FMA's Metal Matters 2009 Leadership Summit, March 25-27, at Carefree Resort & Villas, Carefree, Ariz., and special coverage in *The FABRICATOR*.

For those interested in the Industry Award and perhaps submitting an entry in 2010, visit www.fmanet.org/IndustryAward/IndustryAward.cfm for more details.

sums it up nicely and is a welcomed response by the customer.

"We will give you the best service we can, as promptly as possible, at a price fair to both of us."

John Shickel had that on his original business cards, and the company stands by that promise even today. After all, it still makes sense.

The investment in the staff's skill development contributes to top-notch service and quality, and the latest technology and software assist everyone in watching the bottom line. All of the Shickel family are in a better posi-

tion to deliver on John Shickel's promise than they have ever been.

But that won't keep the company from striving to improve. The company would like to manage the proposal process better. It's looking for good project managers to handle an increase in field installations. Some preliminary discussions are taking place about possibly expanding manufacturing space.

More new faces. More new places. More new cases to practice the company's problem-solving skills. Those are big challenges for Shickel Corp., but nothing a strong family can't work through successfully. ■

Shickel Corp., 115 Dry River Road, Bridgewater, VA 22812, 540-828-2536, www.shickel.com

Calypso WaterJet Systems, 14086 Proton Road, Dallas, TX 75244, 972-488-8661, www.calypsowaterjet.com

Doosan Heavy Industries & Machinery Ltd. Corp., 4350 Renaissance Pkwy., Warrensville Heights, OH 44128, 216-595-1212, www.dhiac.com

Global Shop Solutions, 975 Evergreen Circle, The Woodlands, TX 77380, 281-681-1959, www.globalshopsolutions.com

Hypertherm, P.O. Box 5010, Etna Road, Hanover, NH 03755, 603-643-3441, www.hypertherm.com

ITW Gema, P.O. Box 88220, 4141 W. 54th St., Indianapolis, IN 46254, 317-298-5000, www.itw-gema.us

KMT Waterjet Systems, 635 W. 12th St., Baxter Springs, KS 66713, 620-856-2151, www.kmtgroup.com

Kuhlmeyer USA/Metal Finish LLC, 50 Corporate Ave., Plainville, CT 06062, 860-747-6560, www.metal-finish.com

MG Systems & Welding Inc., W141 N9427 Fountain Blvd., Menomonee Falls, WI 53051, 262-255-5520, www.mg-systems-welding.com



▲ Shickel Corp. still maintains a machine shop. The Puma mill/turning center, with its 16-in.-dia. by 40-in.-long capacity, is one of its recent investments to offer the latest in CNC machining technology.



Let your light shine

Metal fabricating companies that promote their successes and talents build their own image and that of the industry

Dan Davis, editor-in-chief of The FABRICATOR, can be reached at dand@thefabricator.com.

Do you work at a shop that rarely interacts with other businesses or educational institutions in the area? Does your company management panic at the sight of a camera-wielding person walking the shop floor? Do company leaders participate in business groups where they might be able to meet and learn from other company leaders? Does any of this matter?

You bet it does.

To quote an old Baptist hymn I learned as a kid, "This little light of mine, I'm gonna let it shine." In the case of metal fabricating companies, you should be working diligently to share your capabilities and your successes with the world—in other words, letting your light shine. Call the local newspaper about new hirings or a new job. Share organizational updates with the entire work force. Join local business groups or industry trade groups to find out how the world is making it in these difficult economic times.

The better the story you have to share, the more people will be interested in it. And the bonuses of being a celebrity—without the hassle of paparazzi—can be quite nice.

Ask Gary Shickel, vice president, operations, Shickel Corp., the winner of *The FABRICATOR's* 2009 Industry Award. Read the story about a hire his company made toward the end of 2008.

"The last engineer we hired lived in Williamsburg, Va., three hours away. Had a shop of his own. Decided to close it," Shickel said.

"A fellow who lives down there and who grew up in this area said he should check out [Shickel Corp.]. He said OK. Two other people told him the same thing: You need to check these guys out," he continued. "After he heard it the third time, he thought, 'Maybe I need to check these guys out.'"

That's the point that metal fabricators have to remember: If you want the best and brightest to work for your companies, you can't go about your everyday business, ignoring the world outside of current customers and shop floor activities. The word *classified* should neither apply to a company's public relations strategy nor its hiring practices. Both are antiquated.

Shickel Corp. has established state-approved apprenticeship programs for both fabricating and machining and works closely with local educational institutions to find those students who are interested in working with metal and fosters that interest through co-op arrangements. The company also has internships for engineering students from local universities interested in developing metal part design and project management skills.

If establishing those kinds of programs seems a bit overwhelming, consider that Shickel Corp. also performs community service on a smaller scale. The company opens its doors to the community, letting the world learn just what metal fabricating is all about. Its employees routinely speak to local classes and promote metal fabricating

as a potential career choice. Some regularly act as judges for science fairs and other competitions at nearby schools.

Additionally, Shickel Corp. wants the world to know about the exciting projects it works on. It might be an aquatic tank for a Washington, D.C., museum or a giant basketball hoop for a Kansas City, Mo., sports museum. Everyone loves good stories, and local newspapers—or even Web sites—are good places to share them.

These small efforts can pay off in a large way.

"We have a philosophy that we are going to hire good people, not just anyone," said Jeff Stapel, Shickel Corp.'s human resources manager. "I like to think that [the human resources staff members] have something to do with it, but a lot of times it's just a case of a person showing up."

"A fair amount of it is word-of-mouth," Shickel added.

Finding the right employees is always a struggle and promises to worsen as baby boomers take off their welding aprons and put on their Bermuda shorts and navy blue knee-high socks to enjoy their retirement years. The Bureau of Labor Statistics estimates that the U.S. will have only 12.6 million workers employed in manufacturing in 2016, down from the 17.2 million that had manufacturing jobs in 1996. Those types of forecasts aren't going to have young people knocking down the doors of technical education programs or manufacturing companies.

That's why companies need to do themselves a favor and try to elevate their own profiles locally. In the short term, such actions might lure some bright and eager minds your way; in the long run, you are polishing up the image of an industry that deserves to shine.

Reprinted with permission from THE FABRICATOR, February 2009. Visit our website at www.thefabricator.com.
© FMA Communications Inc. All Rights Reserved. Foster Printing Service: 866-879-9144, www.marketingreprints.com.



SHICKEL CORPORATION
115 Dry River Road
Bridgewater Virginia 22812
shickel@shickel.com • www.shickel.com
540-828-2536