PMA PRECISION METALFORMING ASSOCIATION EDUCATIONAL FOUNDATION

Proudly Honoring

Pioneering Metalforming Companies

In this second in a series of articles highlighting Metalforming Pioneer Award winners, the PMA Educational Foundation (PMAEF) Board of Trustees proudly recognizes these three companies:

- Roll Forming Corp., Shelbyville, KY
- Oberg Industries, Freeport, PA
- GR Spring & Stamping, Grand Rapids, MI

Through a grant from The Hitachi Foundation, PMAEF has established this award to identify and develop case studies of employers in the metalforming industry that excel as successful businesses, through enhanced values, culture, policies, practices and investments. These are companies whose success fosters and is driven by skill enhancement and advancement opportunities for their production employees. As a result of these practices, these companies are creating pathways to reach higher levels of business success, and to also increase the earnings and skills of their lower-wage employees. In collaboration with *MetalForming* magazine and in partnership with The Manufacturing Institute, we are telling the stories of these successful pioneer businesses.

Once again, the submissions received were evaluated by a Steering Committee made up of PMAEF officers and staff from The Manufacturing Institute. These three companies join the first-round selections featured in the December 2011 issue of *MetalForming*: E.J. Ajax and Sons, Minneapolis, MN; The McGregor Companies, Springfield, OH; and Pridgeon and Clay, Grand Rapids, MI.

The end result of this program will be to further the Hitachi Foundation's mission.

"The Hitachi Foundation is uniquely focused on the roles of business in society," says Barbara Dyer, CEO/president, The Hitachi Foundation. "Our strategy is to promote employer practices that enhance business value while also boosting economic opportunities for lower-wealth Americans. PMAEF is an excellent partner for us and we are pleased to be a part of the Metalforming Pioneer Awards. The three companies in this second round of awards demonstrate how your sector's leaders are providing great benefits to their employees and communities."

I hope you enjoy reading about these companies in the following pages; they truly exemplify the principles of the Metalforming Pioneer Award. Their stories also will be told through other media outlets, including those of the Manufacturing Institute and Hitachi Foundation. The ultimate goal of this project is to foster direct engagement with other employers in the industry with similar values, culture, policies, practices and investments that strive to meet similar goals of good businesses and good places to work. To fully carry out this goal, you're invited to a series of events featuring presentations from these companies. (See the box for details).

The next round of pioneer company identification is underway. Please contact me directly at dsansone@pma.org to learn how you can be recognized.

Dave Sansone

Dave Sansone
PMAEF executive director

Metalforming Pioneer Events

Webinar 1
Thursday, May 10, 11:00 a.m. EDT—*McGregor Metalworking Companies, Oberg Industries and Roll Forming Corporation*

Webinar 2
Tuesday, June 12, 11:00 a.m. EDT—*E.J. Ajax & Sons, GR Spring & Stamping and Pridgeon and Clay*

Workshop
Tuesday, June 5, 12:30 p.m., Cleveland, OH—*McGregor Metalworking Companies, Oberg Industries, and Roll Forming Corporation*

For more information, please contact PMAEF executive director Dave Sansone: dsansone@pma.org

Pioneer Metalformers Invest in Workforce Development

Case Study:

Roll Forming Corporation

Shelbyville, KY

BY BRAD F. KUVIN
Editor, *MetalForming* magazine, a publication of the Precision Metalforming Association

Prior to the recession of 2000-2001, Roll Forming Corporation (RFC) was a $35 million company. Today it's a still-growing $115 million company that's added—following the dip-and-recovery growth line followed by most U.S. manufacturing companies—110 jobs since mid-2010 throughout its five plants in three states, three in Shelbyville, KY, and one each in Indiana and Pennsylvania. As many of its new hires were displaced workers, RFC's been busy teaching its new employees new skills. And, perhaps more importantly, it's been engraining in them the company's culture of personal accountability and continuous improvement. Long-term success has come thanks to pay-for-skills initiatives, career growth for employees, and a continuous-improvement culture braced with a substantive gainsharing program.

RFC supplies rollformed components and assemblies to customers in the office-furniture, aerospace, construction and solar-energy industries, to name a few. And it offers support services including engineering and product development, as well as inventory management and secondary processing such as tube bending, laser cutting and robotic welding. It's fastest growing market segment, by far, is solar, which accounted for just 2 percent of its work in 2009, climbed to represent 15 percent of its work in 2011 and may reach 25 percent of the company's output in 2012.

We asked RFC president Ray Leathers what, if anything, had to change to allow RFC to satisfy the requirements of its new solar-industry customers.

"As a result of our experiences in meeting the reduced lead times of current customers, RFC was able to meet the shortened response-time requirements of customers in the solar market on a very large scale." Leathers says. "This required us to develop a more flexible supply chain, and inhouse we had to become experts in managing production capacity."

This is where having a workforce motivated to take ownership of their processes, and strive to continually improve them, have led to such quick and profitable growth for RFC in a market segment as dynamic as solar.

"In manufacturing, we do two things," says RFC president Ray Leathers: "Launch new products or work on CI. And if you're not doing either, you're missing the boat."

The New Millennium Brings a New Vision

While RFC has been around since 1947, Leathers notes that its modern history began in 2002, two years after being acquired by the Austrian corporation voestalpine. Emerging

from that 2001 recession, RFC set forth a growth strategy based on benchmarking its large OEM customers—companies Leathers calls "number-one companies in their individual markets." The hit list includes Boeing, Herman Miller, Steelcase, John Deere and Caterpillar, "all of which run very effective manufacturing operations," says Leathers. "We took best practices from each and applied that knowledge to build our own continuous-improvement (CI) program."

To emphasize his commitment to CI, Leathers adds:

"In manufacturing, we do two things, launch new products or work on CI. And if you're not doing either, you're missing the boat."

While a lot of manufacturers talk a good CI game, RFC put some proverbial meat on the bones by developing a gain-sharing program that motivates employees to take ownership of their processes, and work each and every day on CI. The company developed an algorithm that it runs monthly against contributions from measurables such as scrap and cycle-time reduction, throughput, profitability and quality. It nicknamed the gain-sharing program STEPS—Successful Team Effort Provides Satisfied Customers.

Quarterly STEPS bonuses are awarded based on the measured successes from CI initiatives. Since the CI program launched in 2003, quarterly bonuses (equally distributed to every employee) have increased by 95 percent. RFC's goal is to double current bonuses in the next three years.

What's allowed the company to make such a radical jump in how it rewards its employees? "What we learned about 4 years into the program, when results had plateaued," says Leathers, "is that you have to continuously improve the continuous improvement program."

How has CI—and more succinctly—CI of CI—affected overall company performance?

RFC Expands its Pay for Skills Programs

Roll Forming Corp. launched its Pay for Skills Roll Operator Training Program in the 1990s and has since enrolled more than 50 operators in the program. Twenty-eight of the firm's 43 roll operators currently are enrolled in the program, seven of which are master operators.

"We want our operators to progress," says training facilitator Patty Sweasy, "but we don't force it. And when we do get our operators into the program, retention rate is very high. Once operators enter the program and identify a career path, they rarely, if ever, leave us."

"We expect our master operators to move around the shop as needed," says training facilitator Patty Sweasy, "to troubleshoot, mentor and train our other operators."

Roll operators progress from trainee, with an average starting pay of $12/hr., to apprentice, qualified, certified and master levels. Training courses required to jump from trainee to apprentice focus on mill setup and preset, with additional coursework in coil changes and welding, mill maintenance and feeder operations, among other topics. Trainees work in production for 9 to 15 months before they can test up to apprentice, at which point they earn approximately a 20-percent pay increase. Apprentice training then features several hours of statistical-process-control coursework, plus courses in troubleshooting and advanced setup. After another 12 to 18 months on the floor, apprentice operators are ready to test as qualified operators, and earn another 15 to 20 percent pay increase.

Qualified operators become eligible to test as certified operators after substantial coursework in geometric dimensioning and tolerancing and PPAP. They also take a train-the-trainer course. After another 1 to 2 yrs. in the plant, they can test as certified operators, and then begin to work toward becoming a master operator.

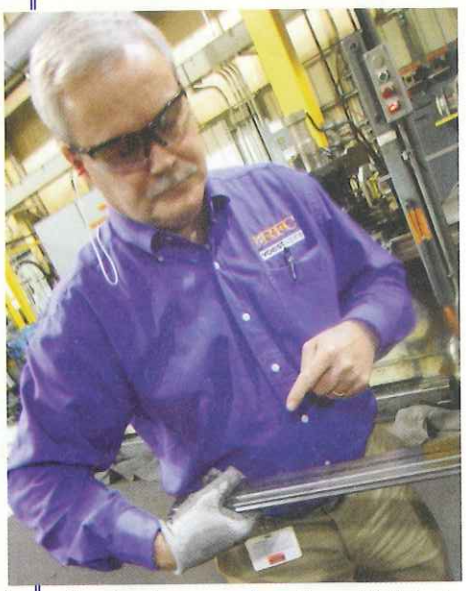
Roll Machine Operator Pay for Skills Program

Level	Typical Coursework to Move to Next Level	Time Spent in Plant to Move to Next Level	Pay Progression
Trainee	Setup, preset, coil changes, maintenance, feeder operations	9-15 months	20% raise as an apprentice
Apprentice	SPC, troubleshooting, advanced setup	12-18 months	15-20% raise as a qualified operator
Qualified	GD&T, PPAP, train-the trainer course	1-2 yr.	15-20% raise as a certified operator
Certified	Feeder programming, root-cause analysis, corrective actions	1-2 yr.	15-20% pay raise as a master

Coursework to rise to master operator, of which there are 10 at RFC's three Shelbyville plants, involves advanced training in feeder programming, tooling and process development and in root-cause analysis and corrective actions. Becoming a master operator also requires completion of CI, root-cause/corrective-action, and new-job tryout projects, without assistance.

"We expect our master operators to move around the shop as needed," says Sweasy, "to troubleshoot, mentor and train our other operators."

The program has been so successful that RFC has mimicked it in other skill areas. For example, in 2000 it launched a pay-for-skills program in tool and die apprenticeship. Nine of the 13 employees that work in the tool-and-die department have completed this program, and another employee is two years into the training. In 2009 the company launched a similar program in laser welding that now includes 15 operators, and in 2011 it initiated pay-for-skills program for quality technicians that boasts eight participants.



Production supervisor Bruce McIntosh, shown here describing a rollformed part fabricated on an RFC production line, credits conflict-management training at the firm's Leadership Academy as helping keep the two CI teams he oversees focused on meeting their objectives.

Leathers summarizes:

"In 2002-2003 we were a $35 million company. Today we're a $115 million company, still growing and with solid EBIT performance. We're launching 120 new parts/yr., and while a few years ago we might struggle to meet launch dates, today we're consistently meeting project launch dates.

"In fact," Leathers adds, "our shareholders are so pleased that they've allotted us a $12 million budget in 2012 for capital improvements. That's the single largest annual budget we've had since 2000. That confidence level comes only as a result of our dedication—from the plant floor on up—to continuously improving our continuous improvement process."

Frontline-Leadership Training Reenergizes CI

Leathers and his management team decided that in order to move RFC's CI efforts off the plateau and up to the next level, it would have to invest in focused training of its frontline leaders. These are the folks charged with directing the company's dozens of CI teams.

"In 2006, we sought out to identify the key characteristics that RFC leaders should have," says Leathers. Efforts centered on developing the skills required to effectively lead teams—specifically CI teams. Then, to teach those leadership skills, RFC launched its Leadership Academy, built upon a series of eight courses designed to develop those key characteristics.

Since 2006, more than 140 RFC associates have enrolled and completed the Leadership Academy. The paid training occurs in eight monthly 4-hr. sessions. Graduates include several rolling-machine operators who have taken on the role of team coordinators. In doing so, they earn an hourly pay increase.

Included in the Leadership Academy curriculum:

- The Oz leadership principle, which stresses individual and organizational accountability
- Improving interpersonal and assertive communications
- Tools to control attitudes
- Dynamics of motivating groups
- Conflict management
- Skills for improved coaching.

RFC Leadership Academy graduates typically point to conflict-management training as a highlight. But Leathers credits the firm's culture of personal accountability, taught using the Oz principle, as truly allowing the CI program to flourish.

"When you have a strong gainsharing program, the best policemen you have are right there out on the shop floor," Leathers says. "And when we started running our employees through the Leadership Academy, we learned that as we provided guidance and leadership to the CI process, the effectiveness of our CI initiatives jumped noticeably."

Of course, when you invite ideas from so many sources, conflicts are sure to arise. Hence the attention to conflict management in the Leadership Academy.

"If you ask about the lessons learned as we've strived to continuously improve our CI program," says plant manager Tony Carriss, "that's the big one. Successful CI teams work to obtain input from everyone on the team, and work through disagreements among team members so we get team-wide buy-in on how to move forward."

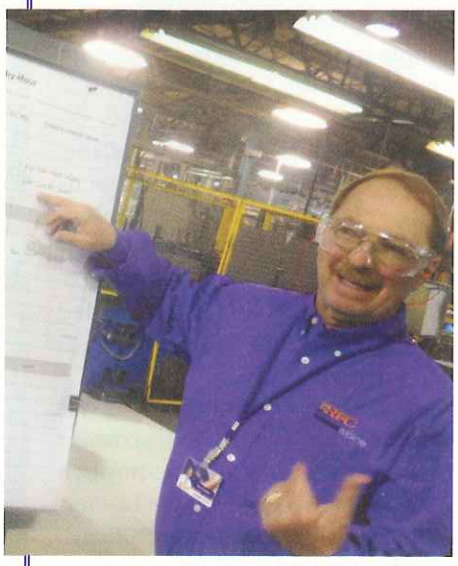
Production supervisor Bruce McIntosh credits training in conflict management with helping him keep the two CI teams he oversees focused on meeting their objectives. "Leadership Academy courses taught me how to properly conduct myself on the floor and in meetings," he says, "and how to handle conflicts between the frontline workers when they arise. I'm a better listener, and a better coach. I encourage the team to stay on task, but it's up to them to get it done. And they understand that."

CI Ideas Born on the Shop Floor

"Every RFC employee sits on at least one CI team, and while maybe 10 percent of their time they're actively engaged on a CI project," says Leathers, "we expect that they're thinking about CI 100 percent of the time."

An overwhelming percentage of CI team projects emanate from the workers out on the shop floor, creating a bottom-up management philosophy markedly different than the top-down management style once in place at the company. So says Carriss, a 28-yr. RFC veteran. Of note is the operators' diligent use of hour-by-hour (HBH) charts to track their work flow, note any hiccups and cite any hurdles preventing them from meeting production goals.

Carriss oversees one of the firm's three Shelbyville plants, which employs 60 on the floor over two shifts, 35 of which are frontline operators. "What the operators note on the HBH charts often turn into CI



Plant manager Tony Carriss notes that what the operators add to their hour-by-hour charts often turn into CI team projects, "so our employees know we're listening to their concerns and actively addressing issues on the floor."

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When CI projects generate additional revenue for the company, or result in savings, RFC's operators can make a direct correlation between their HBH charts, the CI projects they create and the size of their quarterly STEPS bonus. Many such projects deal with increasing rollforming-line speed and minimizing downtime resulting from maintenance issues or changeovers. Carriss cites several examples where CI projects have resulted in increased line speed by as much as 80 to 100 percent, by addressing issues such as machine lubrication and end-of-line parts handling.

Process Ownership Builds a Sense of Pride

Roll operator and team coordinator Ronnie Poynter acknowledges the jump in CI-team effectiveness as a result of his participation in the Leadership Academy. Hired in 1995 almost right out of high school as a trainee roll operator, Poynter has progressed to step four—certified roll operator—in the five-step process (trainee, apprentice, qualified, certified and master) to becoming a master roll operator. And, he's close to climbing that final step up the ladder.

Poynter works at RFC's plant three, housing nine rollforming lines manufacturing products primarily for the office-furniture industry. He recalls that when management first introduced the CI program to employees some 10 yr. ago, "we were all curious to understand how it would impact us on the floor. But once we learned that it's our ideas driving it and we really own the processes, continuous improvement became engrained in the company's culture."

Asked to note some of the bigger CI projects from his team, Poynter describes a scarfing process installed inline on one of his roll lines to peel off weld beads. The process created large amounts of spiral slugs that landed randomly all over the floor. "This created a huge maintenance and cleanup issue—time consuming and unsafe," Poynter recalls. Reengineering the process—with the help of RFC engineer Keith Woods and a modest investment to upgrade the scarfing unit—now directs the offal neatly into a hopper on one side of the machine. The company is saving more than $1500/yr. in maintenance costs, and operator safety has been greatly enhanced. Further, Poynter passed the process improvement over to another RFC plant where the scarfing offal is even more problematic, because waste material is thicker and heavier.

McIntosh, who oversees two CI teams in plant three, shares successes from a team responsible for robotic welding. As part volumes generally have dropped for the plant, and setups per shift have increased, the team needed to focus on reducing setup time. "The frontline operators worked with our toolroom and maintenance department to develop a fixturing solution that is saving us $3000/yr.," McIntosh says. "While this might not seem significant, the team does this regularly. Management expects each CI team to develop at least one project per quarter; this particular team probably executes two or three projects each quarter."

Prioritizing the Project Portfolio

CI facilitator Patty Sweasy—also the firm's safety and training facilitator—paints for us the big CI picture at RFC. "We're yielding anywhere from $350,000 to $500,000 in savings every quarter from our CI projects," she says. Each CI project is documented by the teams and any savings resulting from the project are reported to Sweasy.

"Come the new year, we ask the CI teams to use one CI meeting to focus only on ideas that will immediately result in cost savings," Sweasy says. Teams brainstorm ideas and those ideas the team deems worthy of completion are added to the team project list. Then they are prioritized

Asked to note one of the bigger CI projects from his CI team, roll operator and team coordinator Ronnie Poynter describes a scarfing process installed inline on one of his roll lines to peel off weld beads. Reengineering the process now directs scrap neatly into a hopper, saving the company more than $1500/yr. in maintenance costs while also enhancing operator safety.

Meet Pem Cornell– from Farmhand to Master Roll Operator

Master roll operator Pem Cornell's nearly 29-yr. journey at RFC has propelled him from the fields of Bullitt County, KY, to a critical role overseeing the company's newly minted lean-manufacturing cell. While Cornell is quick to praise RFC's continuous-improvement (CI) initiatives and accomplishments, he says that "continuous-improvement projects generally result in incremental gains; our journey into lean will be a big jump forward." Adds company president Ray Leathers: "Roll lines historically don't run more than about 30 percent of the time. With lean, we're hoping to increase operational efficiency to as high as 60 percent."

Late in 2011, RFC management asked Cornell to help lead the company's lean journey, by working with him to build a model lean production line that the rest of the company could emulate. And he's well into that journey.

"After working on the lean cell for three or four months, I've learned techniques that have dramatically increased machine uptime," says RFC master roll operator Pem Cornell. "Now I see a lot of my coworkers coming around to get a look at what I'm doing…I am enjoying teaching them and explaining why lean is better, and they're buying into it."

"After working on the lean cell for three or four months, I've learned techniques—such as prestaging tooling and managing my material needs—that have dramatically increased machine uptime," Cornell says. "Now I see a lot of my coworkers coming around to get a look at what I'm doing. If they were skeptical at first, they're not now. I'm enjoying teaching them and explaining why lean is better, and they're buying into it."

Cornell clearly enjoys leading RFC's crew of frontline workers on their CI journey, and in particular enjoys encouraging others to become personally accountable—a mantra of company president Ray Leathers. Asked to explain what being personally accountable means to him, Cornell asks rhetorically:

"Who's in charge of quality at my production line? I am. That's what we believe. The operators here don't rely on the quality department or on management. We take it upon ourselves to ensure our lines operate safely and efficiently, and produce nothing but quality parts. If we need help doing that, we go find the help that's needed."

Cornell explains that almost immediately after he was hired as an entry-level roll operator trainee, he would work hard to hone his craft. And when the company instituted its pay-for-skills program in the 1990s, he set his sights on rising to the highest level available—master operator. Yes, by its nature the program rewards skills development with incremental pay increases (15 to 20 percent increases for each of the five levels attained). But Cornell quickly points out that his desire to reach master level was driven by much more than just money.

"I believe strongly that I work for, not at, Roll Forming Corp., and that's a significant difference. I care about this company, and feel that if they (management) invest in me by offering me training and incentives to increase my skills, then I owe it to them to find ways to make the company more money."

for completion. Ideas might be as simple as using a little less grease on a machine, but companywide they add up.

"The first time we conducted this exercise, in January 2009, we documented more than $700,000 in savings," says Sweasy, "and we've repeated the exercise each year since. Savings realized in 2010 exceeded $1.5 million, and in 2011 savings exceeded $1.7 million."

Particularly rewarding to Sweasy is watching the CI teams flourish under the direction of leaders equipped with the skills learned in the Leadership Academy, and through team-building exercises. She's quick to express appreciation to Leathers and other RFC managers who encouraged her to grow beyond her original job in customer service, which she started in 1996. Likewise, she pays forward that encouragement to RFC's rank and file, nudging them to move outside their comfort zones and take advantage of the numerous training opportunities available.

Sweasy adds that in 2011, RFC conducted 2807 employee training sessions (number of sessions multiplied by the number of attendees), accounting for 6935 employee training hours amongst four of the company's five plants. (A fifth plant was acquired in 2009, and did not come under her wing until this year.) Her annual training budget averages $130,000, and it's rising as the firm adds employees. Seventy-five percent of that total is for budgeted and planned training, with the remaining dollars allocated to discretionary training such as Leadership Academy courses. In addition, the firm participates in the Kentucky State Skills Training Grant, which allows companies to recover half of their approved costs for occupational and skills upgrade training through the reimbursement of training funds..

"We've received that state grant for the last 5 yr.," says Sweasy, "to the tune of more than $150,000." **MF**