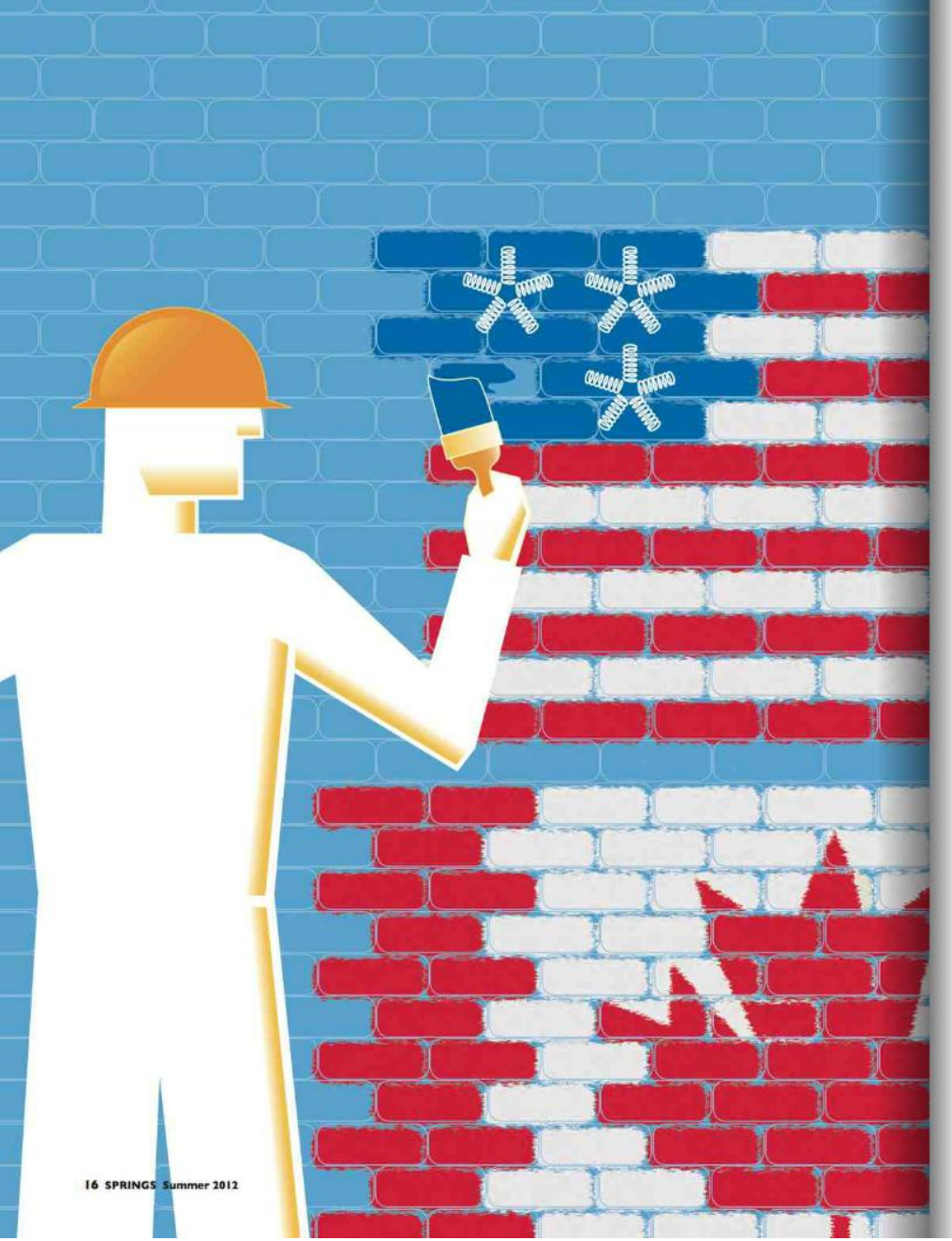

RESHORING:
BRINGING MANUFACTURING JOBS BACK TO NORTH AMERICA

By Raquel Chole

Reshoring, homeshoring, bringing it back. These are just a few ways to say that it's time to take manufacturing back from Asia and other "low cost" countries so that North America can rebuild its manufacturing base.

There are movements afoot to do just that. Many would call the Reshoring Initiative championed by Harry Moser the first foray into a national drive towards reviving manufacturing in the U.S. In Canada, a similar challenge has been issued by the Society of Mechanical Engineers of Toronto, called "Take Back Manufacturing." These are not the only efforts taking place but they have momentum and are making an impact.

As manufacturers were offered government incentives and were rewarded by retailers for relocating their businesses in low-cost countries, the perception of manufacturing as a dirty, low skilled business became prevalent. Vocational schools shifted away from developing shop floor candidates because there was reduced demand for labor, which lead to a dearth of young workers able to enter the workforce with machine shop skills. Young workers were opting for careers outside of the manufacturing arena, which they saw as more elite and respectable, another impetus for vocational education becoming obsolete.

Perception vs. Reality

Those in the manufacturing realm understand that the perception does not match the reality. Modern day manufacturing is clean, requires skilled laborers and needs engineering minds to function at the high level industry demands today.

Kurt Witham of Automated Industrial Motion, based in Muskegon, Michigan, recognizes that and feels that American industry needs to sell itself a little better to youth. He concedes that the reason high schools eliminated wood shop and mechanical classes was because kids weren't interested in pursuing these courses; however, he laments the fact that manufacturing has not been successful in marketing careers to modern-day American kids.

Lindner feels North American companies are not well prepared to accommodate a manufacturing boon. Management wants skilled workers but they don't want to train them, she says. "No one wants to take social responsibility for workers, which at the most basic level is education."

"Kids want a job where they work on a computer all day because they think that is a sign of success; they don't realize that in this age manufacturing is all computer-driven and that manufacturing is highly automated to produce engineered products, so this should be a good match up as a career for them."

Karin Lindner, owner of Karico Performance Solutions, has the right idea. She once worked for a major automotive Tier 1 company but lost her job when the company restructured. She wrote a book called "How Can We Make Manufacturing Sexy?" to combat the perception that manufacturing is a low level career option. She is on board for the reshoring movement and is looking ahead to see where the workers will come from when business arrives back on North American soil. "We have to bring manufacturing back," she says, "but we have to be ready."

For Lindner, it starts with changing mindsets and developing a skilled workforce that can manage new technologies. The reason most companies sought overseas production was cost. Buyers thought that by saving on labor costs they would revolutionize business, but labor costs were only a portion of the equation. Lindner considers the best way to combat that perception is through educating buyers and management to make good decisions. "If we can do that, we can win on so many levels, but big corporations are consumed by ignorance and they don't understand."

She sees that the Chinese understand this well: "China has the drive to succeed but I don't see that motivation in the U.S. or Canada, with some rare exceptions. The Chinese are proactive; we are reactive." Reversing this culture is key to taking back manufacturing.

Bringing it Back

Lindner cites the issues faced by those who want to bring manufacturing back to the U.S. For a start, she feels North American companies are not well prepared to accommodate a manufacturing boon. Management wants skilled workers but they don't want to train them, she says. "No one wants to take social responsibility for workers, which at the most basic level is education." A third factor, explains Lindner, is the communications gap between management and the workforce: They don't understand each other's worlds.

"Most people are frustrated, stressed and negative. Management in major manufacturing companies is disconnected from what happens on the floor. Either they don't see it or it is too much to handle," she explains. "If company owners and managers would be willing to take on the culture we can beat them [the Chinese] on the level of creativity and innovation."

Witham, like Lindner, sees opportunity knocking in the current world climate and would like to roll out the welcome mat for the re-entry of manufacturing to North America. First, there is opportunity in the escalating complexity of engineered componentry. Spring designs are more complex and require more programmable equipment to achieve repeatable quality. Related to this, says Witham, is a continuing proliferation of parts that require special processing for assembly, He says it is important to find a new way to automate that process, since these assemblies are much more challenging than a simple bowl feeder setup.

"Rising labor rates in China, plus the fact that North American manufacturing is simply more productive today than it was 10 to 20 years ago, are good reasons for companies to consider coming home," says Witham. "Our output here is as high or higher than it ever was, despite reduced manpower due to automation.

"I hear all the time that it's hard to find good workers. I think that is due to a discrepancy between the education process and what manufacturing actually needs because there is no alignment between the two disciplines," he explains. And then Witham returns to the perception issue: "A lot of people think manufacturing is a dirty business but that's not the case anymore. It takes a lot of skill to do what we do here."

Automated Industrial Motion is taking mentoring and education into their own hands on a small scale. A small company, they recently hired a high school junior with an interest in pursuing a manufacturing career for a summer job. "If this turns out to be a good fit, we'll help him with his education and train him here in the hope of developing a new employee," says Witham.

"Reshoring is an opportunity for the U.S. You are creating value by manufacturing something. It's not like the service industry, which employs people but doesn't create lasting wealth," says Witham. "I'm glad to see reshoring on the rise."

Canada Joins the Fight

Nigel Southway, chairman of the Society of Mechanical Engineers in Toronto, is very concerned about the decline of manufacturing in Canada due to offshoring. "I'm horrified to see how off balance things have become," he says. As a result, Southway is leading the call for Canadians to bring business back.

"We've got bigger problems than you might think," says Southway. "The Canadian dollar is inflated due to our oil. We have a different tipping point than the U.S. does because of that. Our dollar is 15 points higher than it should be." Then, the other issues, like training and skills are the same, whether from the Canadian or American perspective: "If manufacturing did come back tomorrow we would not have the skills to start up.

"We've got to restore our educational base," says Southway. "We have no apprenticeship programs, no training programs to help bring young people into these professions." Southway's organization is working with colleges and universities to address the conundrum businesses face: it's not just about educating engineers; there also has to be a commitment to manufacturing in North America.

"Industry has forgotten how to improve themselves," explains Southway. "The leaders have forgotten how to build a supply base and how to integrate with computers. They've failed to innovate. If bringing business back is the goal, we will need industry to heal itself before reshoring can take hold."

Accountants can tell the moguls the truth that will bring business back to North America: there are hidden costs to offshoring because there are many more cost drivers in a global supply chain. Southway insists that if businesses "run the numbers," they will discover that it is time to rebirth manufacturing in the West. Once manufacturing returns, the resurgence of innovation in product development will be a fast-track benefit.

Southway sees a long road ahead for the SME initiative. "We haven't turned the corner yet in terms of taking manufacturing back," he says. "We'll begin to see a turn in 2013 and 2014 but we'll be in real trouble in the short term, at least in 2015, because we will be paying the penalty for allowing our capabilities to go overseas and we will need time to rebuild."

Restocking the Workforce

A key component of any discussion of that rebuilding process will be replacing an aging workforce with skilled youth. For Chris Wharin, an owner and administrator of Bohne Spring, this is one of the factors that keeps him awake at night: How can manufacturers meet the challenge of staffing when vocational schools have given up on training students to explore these careers? "There are no well defined programs for springmakers in Canada," he says.

There may be time available to develop these programs, from Wharin's perspective. "I hear buyers say they want to reshore but I haven't actually seen much reshoring: What left is still gone," he asserts. "I don't think buyers look at the whole cost of producing overseas." If they did, reshoring might be more of a priority.

Wharin sees reshoring as a long term, slow process. He says that with the exodus of manufacturing to Asia, it's not just the components that were sourced, it was the assemblies, so naturally the small widgets used in the process were sent "over there" for the life of the program.

Jeff Thulin, quality and production manager for Dendoff Springs Ltd, has seen some benefits of the reshoring movement: "A little of our business that was sourced overseas has come back," he says.

Fortunately for Dendoff, their customer base has stayed relatively stable. "A lot of what we do is heavier [hot wound] parts and I don't see that exiting."

Part of the stability factor for Dendoff is that they have not specialized in any certain market. They have a finger in every pie, so to speak. "We're big in the forestry and in the mining industries, rather than being heavy in cars or trucks. We have a lot of business in related industries, though: We are in locomotives and in snowplows, plus we have a good presence in the oil and gas industry," which is fundamental and elemental to Canadian industry.

A strong suit for Dendoff has been the production staff. "Our employee base has been very stable. We've been able to retain our skilled workforce. If we expand, we don't typically have trouble finding anyone because companies in this region are slowing down more than they are hiring," says Thulin. "We look for young people with basic skills and then bring them into our fold."

That is significant for a company like Dendoff because of the isolation from other spring companies due to geographic factors. "You can't find experienced springmakers in this market," says Thulin. "They have to be created."

Geography colors all that Dendoff does. "We source all of our raw materials from Chicago, ship them to the West coast of Canada, make parts and then ship them across two countries again to their destination. It sounds ridiculous, but somehow it works because there are not too many companies in this product line."

Scott Meyer of Anchor Danly has seen the dark side of sending business overseas, but for him the main challenge comes with sourcing raw material. He says, "We see less wire and rod production, which results in longer lead times. In our case, it was that suppliers were abandoning certain niches that impacted us."

In particular, suppliers who once provided small wire sizes closed up shop and left Anchor Danly scrambling to find new material sources. "Our market is die springs. I don't think they moved the supply chain offshore; I think they just decided not to produce any more."

The state of the economy over the past few years has taken a toll, according to Meyer. Some of his customers closed up shop; some distributors went out of business, which, in turn, had a negative influence on Anchor Danly business.

Beyond impacting sales adversely, the downturn left a void in the workforce development area. Meyer has a wish list of skills he would like to see on resumes: blueprint reading, measuring, and general technical skills. These are limited resources in the labor pool. Meyer is hiring at the lower end of the spring business. "Given our geography, if a potential worker was employed by a spring company previously it was probably us, whereas if they worked for a springmaker in a market like Chicago or California, they've got some diverse experience."

Accountants can tell the moguls the truth that will bring business back to North America: there are hidden costs to offshoring because there are many more cost drivers in a global supply chain. Southway insists that if businesses "run the numbers," they will discover that it is time to rebirth manufacturing in the West. Once manufacturing returns, the resurgence of innovation in product development will be a fast-track benefit.

Engineering and Innovating a Niche

Not all companies are impacted adversely by the exodus of business to Asia. Kerry Cannon saw some key advantages, once he shifted his paradigm. He

owns Cannon Spring and Cannon Racecraft, both of which serve a specialty market. Although he saw some of his sales morph from U.S. dollars into Chinese yuans, he was able to carve out a niche that relied on engineering and innovation to save his business.

"Oil and gas is half of Cannon Spring's business," says Cannon. Cannon Racecraft is focused on specialty components for motorcycles and race cars.

Cannon has found success by focusing on unique materials, like Inconel, chrome silicon and 17-7 stainless steel. "Manufacturers can get generic springs from China but for the complex stuff they have to rely on an innovative company," says Cannon.

Cannon has pride in ownership. "Most of our employees are trained by me. If I wanted someone trained, I'd have to go to Chicago or California or to another springmaking center to find them." Cannon is pleased to call his team true artisans. "A lot of CNCs make great springs but rely on long setup times. I have a guy who operates a lathe and in 20 minutes can set up a spring from scratch that will take hours to do on a CNC. There's still a place for a company like mine with employees who can do that.

"A few times, I've had customers exit the U.S.," says Cannon. One time, he helped a potential customer develop a part and then the production was sourced to China. It was a defining moment for Cannon. "For the future, I'll just let him wait for those cheaper parts to arrive from China," he says, with a chuckle. "Things change pretty fast. I've seen a medical part sourced overseas that took so long to get here that the next revision level was in play before the original part could get here."

Cannon, like Meyer, Thulin and Wharin, sees the future of reshoring tied to a skilled, educated labor force. They are ready to welcome manufacturing back to North America and understand that the new workforce will be developed through their dedication to the task, one worker at a time. ◆

Online resources for finding out more:

Reshore Now - http://www.reshorenow.org— Many would call this site the beginning of the reshoring movement. Especially valuable is the Total Cost of Ownership Estimator, a free tool for estimating all cost and risk factors into one cost for simpler, more objective decision-making regarding sourcing overseas versus sourcing in the U.S.

Reshore America - www.reshoreamerica.com —Currently updating their website but a good resource.

Society of Manufacturing Engineers Toronto: Take Back Manufacturing - www.sme-tbm.org — A look at the concept from the Canadian point of view. This site has a good collection of articles and videos.

Reshoring Manufacturing - http://reshoringmfg.com/ — This site is a repository of articles, blog posts and happenings related to reshoring manufacturing, homeshoring, onshoring, backshoring, insourcing and repatriating manufacturing.