

# LABOR PAINS IN THE AMERICAN GEAR INDUSTRY—ANY RELIEF IN SIGHT?

## LACK OF SKILLED WORKERS MIRRORS U.S. MANUFACTURING'S DECLINE

Jack McGuinn, Senior Editor

Where to begin? First, know this: no serious discussion of the continued scarcity of skilled, up-and-coming engineers and machinists in the gear industry makes sense without acknowledging the bigger picture. That would be the ongoing loss of manufacturing industries and jobs in general that has literally changed the very fabric of the country. And if we are looking where to assign blame, there is no lack of bogeymen at which to point the collective finger. The usual suspects include recalcitrant labor unions; greedy management; NAFTA and CAFTA; a tilted playing field abroad of low wages and unfair environmental and labor regulations; and an under-performing public education system that does little to encourage young minds that a life in manufacturing is a life well worth living. One more thing to keep in mind: There is as yet no definitive, national consensus on how best to reverse these trends.

As for the gear industry, it must acknowledge and accept its symbiotic relationship with The Big Picture—that its own travails are simply another symptom of a much greater

paralysis—or an infusion of much-needed new blood will never happen.

And yet, gear makers—from job shops to captive shops to OEMs—can take heart in the fact that there are people of influence in the gear industry and other sectors all across this country who have long-recognized the disease and its symptoms, and who are passionately committed to doing something about it. Whether it be grassroots organizations, industry associations, government-sponsored foundations or enlightened educational entities, all are dedicated to being agents of change regarding the No. 1 challenge: Restoring the image of manufacturing in the eyes of young people—and educators—as a respectable, financially rewarding means to make a living and a life. For the many who are involved in the fight, that perception change begins with the schools and our country's understanding of the influential role they play in preparing our students to compete in today's global economy. In a sense, it's the semantics of when a "job" becomes a "career."

**When does a job become a career?** "There has been an enormous change in society's perception of education, particularly at the middle class and blue collar levels, says Geoffrey Ashcroft, director of the Richland, MI-based Gear Consulting Group. "Today, a college education is considered a must for anyone having aspirations of a career, rather than a job. This is strongly encouraged by academia at the high school level, where the prevailing attitude is that, without a college education, there is no respectable opportunity for advancement. Blue collar opportunities are rarely discussed, and 'shop' classes are regarded as being for the least-bright of the student body—those who are not destined for a 'good' college.

"I honestly believe that a large percentage of high school faculty are not aware of what rewarding opportunities there may be in manufacturing, and that the opportunities for advancement in those environments may be considerably better than in other careers. It's industry's job to educate our educators in this respect."



Schafer Gear's Jim Shinall (left) providing Brent Cronk some on-the-job training on gear nomenclature.



Schafer's David Brooke (left) instructs Shane Carpenter at a CNC hobber on the finer points of gear cutting.

Ashcroft, whose company conducts most of AGMA's on-site training programs, believes the gear industry is having some success in recruiting skilled workers, but inherent problems persist.

"There is not, and never will be, a mandatory system of education and certification of machinists and related trades," he says. "The fact that the gear industry utilizes unique machining processes reduces the supply base of qualified people."

But those "unique machining processes" are just one reason for the labor shortage. Concurrent with the lack of young workers, an increasingly graying workforce is also at play. According to AGMA industry figures, in 1997, nearly 25% of the gear industry workforce was between 18 and 29 years old. That share dropped to just over 10%; and the organization's most recent figures reveal that 55% of workers are beyond age 44.

Joe T. Franklin, Jr., president of the American Gear Manufacturers Association (AGMA), in Alexandria, VA, shudders to think what the next report will bring.

"The data from 2005 and 1997 paints a striking picture. Our employees are getting older, and fewer younger employees are being hired to replace them," he says.

Which comes of course as no surprise to him. And as president of AGMA, his concerns are both long- and short-term. The problem he hears most about right now concerns a shortage of workers of *any* age, which he attributes in part

to manufacturing's relatively good health, and, like Ashcroft, to the concern younger employees have about the ability of manufacturing to provide them with a longer career.

"Today, most manufacturing industries are booming, and the pressure to find people grew, as the ramp-up from the bottom of the 2000 recession was very quick," he states. "Greater demand for manufactured products emphasizes the drop in available workers."

**Training requires management commitment.** In addressing that shortfall, Franklin firmly believes AGMA is doing some good things in that regard. He notes there is no shortage of programs, grants and other funding available for training in the gear industry. And it's those companies that consistently avail themselves of those resources that, not surprisingly, are most successful.

"The impact of the (workforce) shortage, and what companies are doing to address it, varies greatly," says Franklin. "Some of our (AGMA) members are very well-positioned with their local high schools, community and technical colleges, and some universities. These companies are successful and do not appear to have much of a systemic problem. But identifying and hiring good people is an ongoing process for them, not something they do sporadically."

Beyond that, Franklin believes it's all about commitment. "Again, like those companies that work with the community colleges and technical schools, it takes a commitment from the company to be successful."

Actions often speak louder than words, and Franklin takes great pride in AGMA's dedication to real-time, on-site training for gear companies (AGMA membership not required). And the results demonstrate that the need—and desire—are out there.

"We have added the option for individual companies to have an (AGMA) instructor come to their plant for 2–3 days to provide individualized instruction. Most recently, we extended these courses by adding three online components—Fundamentals of Gearing; Inspection; and Hobbing. We have had over 2,000 individuals register to use these courses over the last three years. Interestingly, over 40% of the registrants have over two years of engineering." (*Editor's note: Please see article on pg. 32 for more on AGMA's education and training programs.*)

But along with AGMA's efforts, more is needed. According to Stan Blenke, executive vice president for South Bend, IN-based Schafer Gear Works, Inc., and 2006 AGMA chairman, on-the-job training remains a staple for gear makers.

"Today, most gear companies have no choice but to train on the job. AGMA is offering several avenues to assist companies to train their workforce." In addition, Blenke points out, the association sponsors a gear training school at Daley Community College in Chicago, including the recent addition of advanced-level courses online, as well as stand-alone seminars. But he believes companies—as well as the communities in which they operate—can and should demand more. And be willing to pay for it.

"I believe that every company should invest at least 3% of their annual payroll in employee training," he says. "All of us need to get involved with Workforce Investment Boards, government-sponsored training programs, and local

educational institutions such as community colleges that offer training in manufacturing skills.

"We must create an atmosphere that nurtures the aspirations of today's workers. Constantly look for opportunities to empower employees at all levels, and to create the corporate culture for a high-performance, exciting place to work."

**Get 'em when they're young—and impressionable.** "I believe (interest in gear making) starts at an earlier age," Blenke says. "Whether students plan to go to college or work, they equally need a more rigorous K-12 education, both in academics and in career technical preparation. Much of the support depends in part on the output of the K-12 system." As for manufacturing's tarnished image, "Negative images remain, and some people still consider manufacturing jobs to be low-paying and dirty," he says. "The challenge before all of us is how to broadly communicate information about modern manufacturing, and the satisfying careers it has to offer.

"All of us can do more. We must continue to strive to develop a corporate culture that nurtures the aspirations of today's workers. The best qualified workers are looking for more than a paycheck. They are looking for independence, involvement in decision making, and transferable skills and experiences that will make them valuable to the market, as well as to their current employers."

Daniel W. Carleton is the manager of the Global Gear Program for Detroit-based American Axle & Manufacturing, Inc. He has another take on the situation—somewhat along the lines of "this not your father's gear industry."

"The gear industry has an image problem. College kids, and recent grads, including my own son and daughter, aren't interested," he believes. "We have to sex it up a bit—stress the cool stuff, like the Army did with those ads some years ago. It isn't good to represent ourselves as a bunch of oil-stained, grizzled old farts who talk about the good old days. We need to stress the power aspects of the job. Car and motorcycle racing, the LCAC (Landing Craft, Air Cushion weapons system), sexy stuff that grabs someone's attention."

Boiled down, what Carleton refers to is a need that is recognized by any number of associations, institutes, councils and other entities that have taken up the cause of promoting manufacturing's traditional contributions to our society's quality of life. What is it? Marketing and awareness campaigns. And the more, the better. Getting the word out, as the saying goes, regarding cutting-edge, "clean" manufacturing technologies and processes, and the role they play in positioning high-tech, high-value-added manufacturing as a destination for young people with a desire to perform meaningful work and to be fairly compensated for it.

**A need to get our priorities in order.** Carleton's views are doubtless shared by many. And, wittingly or not, they refer in some respects to the point made at the outset—the United States must first get its groove back if anything is to change. It is a need to get back to making things again, and making them here. Cam Drecoll, president of Brad Foote



Geoff Ashcroft conducting an AGMA gear class at Mitchell Community College, Statesville, North Carolina. Attendees at the session were from a variety of gear manufacturers, including some from as far away as Australia.

Gear Works in Cicero, IL, minces no words in support of that concept. And he has no illusions over who shares a good deal of the blame on how we got to this point.

"There is a general lack of pride in the U.S. for jobs that produce real products. It is somehow looked down upon if an individual works with their hands," he says. "I think it begins with the expectation that every child is expected to go to college. That viewpoint is expanded in our schools, with little thought to the outcome for those students that will not achieve that goal. It is shocking that, in large cities with a high percentage of students that do not go on to college, there is little thought of their future," he states. "The education system has little interest, and even less knowledge, of the needs of the manufacturing community." And yet, he adds, "A machinist makes more use of trigonometry in a day than most college students do in their entire career."

As evidenced by his comments, Drecoll believes the school system, as well as government, have something of a learning curve of their own to deal with, particularly as it concerns the legitimacy of manufacturing's role in a productive society; a role that continues to be well-respected in Europe, where the priorities are different.

"(The dynamic) is much different in Europe," he says. "A job as a skilled machinist is seen as an honorable career. They take pride in their workmanship and develop their skills. The burden should fall on (our) government to support the manufacturing base in general. This of course has not been a priority for some years, with the illusion that our country can be a service economy. Unless we change our course, the future of our country can be seen easily enough by the decline of Great Britain. The large challenge lies with educating our representatives in the government. This is a steep battle because they are a product of our education system—the same system that does not respect the need to make real products."

Geoff Ashcroft also looks with envy at Germany's regard for manufacturing skills.

"In Germany, the apprenticeship part of an engineer's resume is considered as important as the academic part, and an engineering degree from a part-time institute can only be undertaken in conjunction with an apprenticeship or internship," he says. "A graduate engineer with a related apprenticeship/internship is considered every bit as valuable as a bachelor engineer with a pure college degree, maybe more so. German companies employing skilled workers are expected to maintain a quota of apprentices in their company; there is a financial penalty for not doing so."

So where does that leave things, specific to the gear industry's image and attendant labor challenge? How in fact do we ingrain in our young people—and the teachers and politicians—that skilled positions in today's high-tech, high-reward industries are well within the reach of those who cannot afford college, or who simply decide that college is not for them? For the answers, look to the network of community- and regional-based educational outreach programs and

other initiatives that are springing up all around the country. If manufacturing is to again flourish in America, that is where the seeds are and will continue to be planted.

But what of today's lack of skilled workers? From where will relief come for that dilemma? Drecoll and the others quoted here feel that it will have to be more of the same—on-the-job training. But, hopefully, more of it and more effectively. There may even be a silver lining to be found—i.e., a competitive edge for those companies who, as AGMA's Franklin mentioned earlier, excel at it.

"There is little choice but to conduct on-the-job training," agrees Drecoll. "There is not another source for (existing) workers. This leaves training as another competitive tool. The companies that can effectively train new (and remedially train existing) workers will be the ones that survive and prosper." ●

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