Outsourcing Education

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By RACHEL LEISEMANN IMMEL, Associate Editor, *Industrial Maintenance & Plant Operation* (*IMPO*)

As American manufacturers look to regain momentum in today's economy, a main concern will be talent. Squeezed by time constraints and a challenging economy, many manufactures don't have the internal resources necessary for maintaining well-trained employees. In addition to new technology training, there will always be new techniques, business demands and company initiatives that will require training.

A difficult part of the employment process, employee training requires both time and money. Many manufacturers can only afford to stop production for critical functions, and oftentimes employee training doesn't fall into that critical category. But in an industry that employs 13.8 million people, the untrained employee can cost millions through accidents, inefficiency and contributing to unsustainable manufacturing practices. As technologies and processes continue to improve, and become more efficient, U.S. manufacturers are relying on an educated workforce.

Instruction Included

Training an employee to properly and effectively perform a job is an investment of time and money, not just an expense. Many manufacturers are deferring maintenance — including employee maintenance — due to challenging economic conditions. Paul Humphreys, vice president of communications and branding with Atlas Copco Compressors says, "Companies that have made these tough decisions are now living with the risks associated with those decisions."

“It will be very challenging for any company to grow and succeed if their employees are not growing along with them,” Humphreys says. “From training also comes new ideas and techniques that can help companies achieve their goals and empower employees to enact lasting impactful change.”

A leading compressor manufacturer, Atlas Copco focuses on sustainable productivity and helping its customers get the most out of every investment — including investments in human resources. More and more manufacturers are looking outside their own walls for capability development, and many turn to their suppliers to train employees on new equipment. A customer-focused approach is at the core of Atlas Copco’s offerings in compressor equipment customer training.

Humphreys emphasizes, “One of the most impactful services Atlas Copco can provide is training customers on the correct usage of compressed air.” The correct usage of compressed air includes closed hose nozzles, using the correct compressed air and tools for the task at hand and setting air compressors to the proper PSI — which every manufacturer using compressed air can do to cut waste.

According to the U.S. Department of Energy, compressed air accounts for 10 percent of all electricity use in U.S. manufacturing, making it an important area to look to for cost savings. Humphreys says that 10 percent of energy usage — combined with leaks, inefficient design, incorrect uses and poor maintenance — totals more than $3.2 billion annually in wasted energy use in the United States.

“We’ve had customers lower their system’s pressure by as much as 11 PSI without anyone on the production floor noticing,” Humphreys says. “That is enough to save potentially more than a hundred thousand dollars a year.”

Many manufacturers are looking to suppliers for support in everything from system monitoring services to training. Atlas Copco provides this support through a variety of auditing and monitoring services, and also through its on-site customer training. Training at the Atlas Copco Air Academy, located at its North American headquarters in Rock Hill, SC, includes hands-on training on compressed air system components like dryers, filters and energy-saving systems. In addition to teaching the appropriate uses of compressed air, Atlas Copco experts train customers in the field on how to save resources through proper system sizing and design.

Buckets of Work

While it would be great if all that was required to learn a new skill was to “read the book” or “follow the directions,” employee training is not that simple. It involves much more work by both the trainer and the trainee to produce sustained, significant skill improvement. Senior consultant Brian Schramke with Kepner-Tregoe, a consulting and training organization, says there are typically five “buckets” of work on which organizations must focus to ensure that any improvements gained from a training agenda become sustained:

1. Goals and metrics need to be evaluated to make sure that proper execution is recognized, monitored, rewarded and corrected as needed.

2. Knowledge management and information technology should enable — not dictate — proper use of the developed skills and improved processes.

3. Organizational structure may need to be evaluated so that the proper use of the developed capabilities is not hindered.

4. Continued capability development to keep the skills fresh, and leverage basic skills on increasingly complex issues is required.

5. Evaluating how the culture of the organization encourages or discourages using these skills may be required to ensure sustainability.

Today, many manufacturers who are investing in well-trained employees are outsourcing the task to companies who specialize in tactical troubleshooting and strategic decision-making, such as Kepner-Tregoe. Following a systematic teaching method that uses questions to help the learner internalize knowledge, Kepner-Tregoe was founded over 50 years ago with a mission to develop organizational capabilities in the areas of rational problem solving and decision making, as well as project management thinking.

Kepner-Tregoe accomplishes this through classic classroom training, results-based skill development intervention and business process improvement projects. “In all cases, skills are developed via a mixture of case studies to provide practice and coached application of the concepts learned on real-life business issues,” Schramke says.

In addition to traditional classroom training in a brick-and-mortar environment, Kepner-Tregoe is seeing more and more manufacturers requesting to be kept out of a classroom environment due to time, travel and cost restraints.

“More and more organizations are reducing the amount of time they are able to dedicate to capability development,” Schramke says. “More recently, [they are] looking to technology to enable transfer of the capability in different ways.”

Kepner-Tregoe’s virtual learning is tailored to the goal of each manufacturer, and typically includes a number of web-based lessons with voice-to-voice follow-up and coaching. Lessons are taught via the web and then trainees are asked to perform a skill based on the lessons. They provide an electronic record of how they applied that skill to an instructor who then gives feedback and coaching via telephone. Kepner-Tregoe is currently developing video-based distance learning programs as well.

Though web-based learning alternatives may be a cost-saving option for many manufacturers, it is not without its drawbacks, says Schramke. “It’s certainly the least personal means of delivery, and requires the students to do a lot more and be

much more motivated to do it," he says.

In addition to the virtual learning, other approaches include results-based skill development intervention, which involves training that is heavily focused on helping individuals apply new skills to a specific issue within their organization. Business process improvement projects engage workers in the sustainable incorporation of decision-making and problem-solving skills to achieve specific goals within an organization.

Path of Least Resistance

Higher material, fuel and energy costs have forced many manufacturers to cut back in all facets of their business, including training. "Everyone has 'day jobs' that are critical to keeping the organizations productive and profitable," Schramke explains. "People often do not think that they can spare the time to learn new skills or work on projects that are outside of their daily responsibilities." Most manufacturers have little time to expend on training efforts, and Schramke offers ways to get the most out of a training exercise. Like most trainers, he works most often with case studies, but tells students to bring a specific problem from their job to class.

"Bring your issues to class," he says. "There's no value to you or us in you solving this case that I've taught a thousand times." Students can bring in an on-the-job unknown deviation to class, and they will need to use a root cause process during the class to solve it. Schramke says that by the end of class, students will at least be able to determine what information is still needed to solve a problem, but many times will be able to go back to work and actually fix a problem that they may have been struggling with for awhile. Schramke says, "Training is no longer seen as a 'check in the box,' but is expected to be put to use and provide a return on investment to the organization."

"There's always a student that comes to class that says 'I don't have any problems and they don't let me make decisions,'" Schramke says. He adds that, though a rare occurrence, he always stresses the importance of working on a real problem to gain the most value from a training experience. He stresses, "I'm certain that you're probably falling three or more days behind by being here, so please get something out of it."

Humphreys adds, "Companies that keep pushing learning, and advancing their manufacturing methods and technologies will certainly have a leg up on the competition in the future."

How do you train your employees? Sound off below in the comments section. For more information, please visit www.atlascopco.us/usus/ *[1] and/or* www.kepner-tregoe.com *[2].*

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