

Custom Products, Standard Training

Rosenboom of Sheldon, Iowa, built a thriving business delivering hydraulic cylinders engineered for specific applications and custom solutions. It provides precision hydraulic cylinder systems to the construction, refuse, agriculture, fire rescue and transportation industries. The company's motto is "Custom. Crafted. Cylinders."

The custom-engineered hydraulic cylinders it makes range in bore sizes from 1" to 12" (25.4 mm to 304.8 mm), stroke lengths up to 24' long (7.31 m), and operating pressures up to 5,000 psi (34.5 MPa), with peak pressure of up to 10,000 psi (68.9 MPa.) The company produces almost any style of cylinder and a variety of integrated valve options and sensors.

To produce reliable custom products, Rosenboom embraced standard work-in-lean cellular manufacturing processes along with a culture of continuous improvement. A good process is important, but more than that is needed. Good workers are critical. Experts trained in their specialties, such as CNC machinists, and trained in the production process the company has adopted are a key part in Rosenboom's success.

Difficulties in training people to become experts and keeping them experts in their specialty is a problem often encountered by manufacturers big and small—and so it was with Rosenboom and its 770 employees when Tooling U-SME first partnered with them in 2007.

Internal Training to Meet External Demands

There are many reasons for needing an effective training program, according to Don McLeland, manufacturing trainer for Rosenboom. For example, the Occupational Safety and Health Administration requires certifications as part of an industrial truck program Rosenboom is involved in. "Also, many of our major customers were ISO certified and were urging us to become ISO certified as well," he said. "That was a key trend at the time, requiring us to create a more standardized training program."

Success in the market was also creating its own problems. "We had experienced rapid growth," said McLeland. The company was keeping customers satisfied, but there were struggles with on-time delivery of product, as well as issues with rework and scrap, which weighed on profits.

"While a training program existed, it had gaps—and the managers at the time knew training needed more consistency," said McLeland. "We turned to building a standardized

training program."

A key external demand in today's manufacturing environment is the competition for personnel. It is intuitive that, for many workers, a company that helps them succeed through training is a place they feel some loyalty to. "To compete for workers requires recruitment, benefits and giving them tools to do their job well," said Angie Johnson, training and development coordinator for Rosenboom.

In-Person, Online, Hybrid Training Meet the Need



In 2007, Rosenboom made significant changes to its onboarding process, insisting that new employees complete learning assignments as part of their introduction to the company. (All images provided by Rosenboom)

"In 2007 we made significant changes to our onboarding process," said McLeland. "We insisted that new employees complete learning assignments as part of their introduction to the company. Our methods were classroom instruction, on-the-job training with on-the-job trainers, and then [online training modules with] Tooling U-SME," McLeland said.

Like any good employer, Rosenboom also surveyed those employees. "Of the three methods that we were doing, the responses indicated that Tooling U-SME was the most helpful because they were learning things online that were

immediately applicable,” McLeland said.

The results were so successful that for new Rosenboom employees, taking the classes is now expected. “Since 2014, when we onboard employees for production roles and make those initial assignments, we tell them that [completing the training] is an expectation, and we ask them to work daily until those assignments are done. Sometimes it takes about a month. They may have 25 assignments, taking about an hour at a time out of the production day,” McLeland said.

Better Retention, Less Scrap

Something worked. Just prior to the pandemic, for a period of almost three years Rosenboom had 98 percent on-time delivery, McLeland reported. “Our training program improvements were not fully responsible for that change, but they certainly did contribute.”

Employees find personal benefit in the training. Retention has increased by at least 10 percent as measured by the company in the first few years of the program, according to Johnson. “It also helps our employees understand a little bit more about what the ISO certification is all about—helping us create that culture of continuous improvement,” said McLeland. Especially for employees who are new to manufacturing, a training program helps dispel misperceptions they may have, especially around the principles of lean. “To untrained eyes, a lot of things don’t make sense,” said McLeland.

The online format was important. Johnson noted that employees can work at their own pace, as well as see videos that help illustrate key concepts. It is difficult to see all the intricate details looking through the window of a real CNC machine’s cabinet. Tooling U-SME courses provide a visualization of an operation, even if it is not exactly what Rosenboom does. “We can still take parts of the training and then go out to the floor and say this is how it applies,” said Johnson. Because Tooling U-SME is available online, employees can also fit it into their schedule when convenient for them, rather than work around a fixed schedule of classroom training.

Video and visualization are key features, McLeland pointed out. It is well known today that everyone has a different learning style. Some can read and learn, others can

listen and learn, still others need visualizations to learn—and some might need a combination thereof. “We have some people who don’t read; they can read, [but] they just don’t do it,” said McLeland. “Some will only listen to the audio portion, and that is an attractive feature.”

The training has proven so useful that, since 2014, new employees are incentivized to take the on-line learning modules. The company makes it part of their skill assessment certification and pay system. “You won’t necessarily lose your job if you don’t complete the courses, but getting



Since 2014, new Rosenboom employees are incentivized to take on-line learning modules offered through Tooling U-SME.

the Tooling U-SME training done affects their wage potential, and they know it,” said McLeland.

It also helps ambitious employees change roles. “We have a woman who went from being a forklift driver to running a CNC. Watching the Tooling U-SME videos really made it click for her, and she was thankful. It helped her make that transition to CNC machining,” Johnson said.

“It’s been a great relationship between Rosenboom and Tooling U-SME,” McLeland concluded. ➔

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