Job Connection

How Heidenhain's ACU-RITE Brand Helps Manufacturers Build Skilled Workforces

Roland Jones | Aug 31, 2021

The skills gap poses a significant problem for manufacturers. Here's how one well-known provider of manufacturing tools and products is helping to educate the next generation of machinists and manufacturing workers.

U.S. manufacturers are facing many challenges, but one of the most significant is the growing skills gap.

Manufacturers around the country, many of them family-owned, are facing the challenge of finding experienced workers to perform specialized metalworking and machining tasks needed by their customers.

According to ***the National Association of Manufacturers***, 4 million manufacturing jobs will likely be needed over the next decade, and 2.1 million could go unfilled if we do not inspire more people to pursue modern manufacturing careers.

And the cost of not filling those opportunities could be significant, according to ***a recent report***, as it may prevent manufacturers from taking on new work and expanding their offerings. Consulting firm Deloitte and the Manufacturing Institute estimate that those missing jobs could potentially cost the industry $1 trillion in 2030 alone.

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> Richard Brown
> Horry-Georgetown Technical College

While millennials—defined as those born between 1981 and 1996—make up almost half of the U.S. workforce, most manufacturers are still very reliant on baby boomers. Research shows that around 27 percent of the manufacturing workforce is age 55 and older. Attracting younger workers into the industry, and ensuring they are well-versed in traditional and newer technologies and techniques, is, therefore, an imperative for the manufacturing industry.

Incorporating ACU-RITE's DRO Technology

What can manufacturers do now to address the growing skills gap and position their companies for future success?

One approach is to encourage each cohort to share its skillset and work with younger employees to ensure knowledge is transferred from one generation to the next. Other approaches include investing in computer science and advanced manufacturing courses or offering apprenticeships, job sharing, mentoring and consulting.

HEIDENHAIN's ACU-RITE brand has tackled the skills gap problem by working with educational programs to help prepare students for a career in manufacturing. An example of this initiative is ***a partnership*** between ACU-RITE and Horry-Georgetown Technical College in Georgetown, South Carolina.

Watch: Video: ACU-RITE and Horry-Georgetown Technical College: Shaping the Future of American Manufacturing

The Georgetown Center for Advanced Manufacturing opened in 2019 and includes a 30,000-square-foot facility with welding, machine tool and mechatronics technology programs.

The college recently made significant investments in its machine tool programs, outfitting the machines in its advanced manufacturing centers with ACU-RITE digital readout (DRO) technology.

"We felt like we wanted to incorporate DRO technology on all of our manual machines from the very beginning," says Brandon Haselden, the manufacturing school's dean of academic affairs.

Designed and manufactured in the United States, ACU-RITE's DRO systems are seen as the industry standard in the machine tool marketplace. Haselden praises the durability and reliability of the systems: "We've never had an issue," he adds. "That's extremely important from an investment perspective."

Offering a Hands-On Perspective

With employers struggling to attract properly skilled individuals, and fewer younger workers attracted to manufacturing career paths, Horry-Georgetown aims to skill up younger workers so they can enter the workforce and fill the manufacturing industry's vacancies.

The program takes students from the foundational skills they need to the completion of more advanced skills, such as programming of CNC machines, notes Richard Brown, a machine tool instructor at the college.

"A lot of schools are teaching CNC only, and here we feel like you need the foundational skills so that if something goes wrong with the program, you know how to adjust it," Brown says.

ACU-RITE's DRO systems are a good teaching tool because they take about 15 minutes to learn, and they give students a hands-on perspective, Brown adds. Students see exactly what is happening as they move the dials, and "once they get that, then you no longer see them watching the dials; you see them just watching their screen and they know exactly where it's at as they're cutting the part."

Horry-Georgetown is not the only educational establishment where ACU-RITE is helping to train younger workers. Students at Randolph Community College near Greensboro, North Carolina, ***use several ACU-RITE controls and DROs*** to learn how to operate manual lathes and mills in real-world manufacturing settings.

Watch: Video: ACU-RITE and Randolph Community College: Shaping the Future of American Manufacturing

Garrett Parker, head of the college's Computer-Integrated Machining program, notes that the college visits manufacturing companies to see what kind of equipment they have on site and tailors its curriculum accordingly, training students to master the technologies and equipment they'll be expected to understand when working in the "real world."

"The ACU-RITE control is very user-friendly," he says. "The students can quickly go to the control for the first time, understand how the control works, what it's supposed to do, and they can very quickly pick up and write a simple program to be able to produce a part," he adds. "It's a win-win for the student and the instructor."

At Guilford Technical Community College (GTCC) in Jamestown, North Carolina, 18 MILLPWRG2 full-function DROs ***are being set up on mills*** as the college expands its Computer-Integrated Machining program to its new Center for Advanced Manufacturing.

"The reason we got the G2s is to help our students transition from manual machining to the CNC side," explains Derek Seeke, a GTCC machining instructor at the college. "Whatever program they come to here, students have to do at least one manual machining class."

Setting the Standard in Technical Skills Training

Given the aging workforce and the fact that training in the industry has lagged as technology has advanced, the pipeline of talent for advanced manufacturing jobs, which require more technical skills than past manufacturing jobs, is falling short of demand.

Creative solutions such as the ACU-RITE partnerships with technical college programs help manufacturers improve the way they attract the new generation of skilled workers and achieve better results in the future.

Students at Horry-Georgetown have a purpose: an interest in working with their hands and the desire to work in a manufacturing environment, Haselden says. That's why the college's goal is simple: to set the standard in technical skills training. It's a goal that's shared with ACU-RITE and any other major machine manufacturing company, he adds.

"It's truly a great time for the manufacturing world because of the demand for skilled labor," Haselden says.

"We have tremendous success here at Horry-Georgetown with our student graduates, many of them in the industry less than five years and already making six figures, having a foundational financial security for them and their families," he adds.

"We have got to do something to bring more students into these programs for the manufacturing arena to stay viable and stay successful in America."

What steps are you taking to tackle the skills gap and promote U.S.-based manufacturing? Share your thoughts in the comments below.