

Developing the next generation of welders

by Molly McCormack Moody,
assistant editor

From construction to automobiles to aerospace, welding is crucial to infrastructure, mobility and progress. Even as a cornerstone of manufacturing, the welding trade is no stranger to the ever-present skills gap; The Bureau of Labor Statistics reports a 30 percent decrease in welders in the United States since 1988. With that steady decline over the past 26 years, educational institutions like the [Tulsa Welding School \(TWS\)](#) are looking for ways to build up interest in the industry and create a new generation of well-trained and prepared welders.

Dion Thornhill, campus president for TWS's Jacksonville, Fla., location, is excited to dispel the stereotypes that surround the industry and is eager to help those interested in pursuing a career in welding. Thornhill's own journey to welding and his growth inside the industry is an inspiration and lesson to those that have not yet seen the possibilities of a welding career.

After graduating from Georgia Tech, Thornhill took a job with The Lincoln Electric Co. as a technical sales engineer. With the training he received in welding,

robotics and VRI (virtual reality integrated welding), Thornhill was equipped with the knowledge he needed to help weld shops become more effective and efficient. For the past three years, he's taken the hands-on approach he learned with Lincoln Electric and implemented it at TWS Jacksonville.

"We've removed books from our curriculum," Thornhill says. "Everything is online and the students receive tablets. Now, the students are more engaged because they're able to do their work and take their tablet out on the floor to video and review the process in real time."

In addition to transitioning students to mobile-based learning solutions, TWS built a refinery on the school's campus to get students more hands-on experience, especially with stick welding. Thornhill mentions that with industry standards and techniques constantly evolving, the

refinery was built to evolve to produce more well-rounded students.

"It's referred to as a refinery because it has many of the same aspects," Thornhill says, "with confined spaces, pipes, the ability for student to weld in and out of position, utilizing rigging skills, wearing hard hats and tying off when they are 6 ft. above the lower level. It's almost like an adult jungle gym. Students can also create pipe layouts utilizing blueprints, mathematics and the appropriate equipment to properly fit a pipe from one flange to the next."

Along with the refinery, TWS also created a large demo space on campus. The equipment in the demo area has Go-Pros attached so that students can record and review their techniques.

According to a 2016 Accenture Strategy study, 42 percent of four-year college graduates leave school with a job. This >

"I tell my students that they are elite. Only one percent of the population knows how to weld."

Dion Thornhill, campus president, Tulsa Welding School, Jacksonville



is a stark difference compared to the 84 percent of TWS Jacksonville graduates that leave with a job, Thornhill says.

With the impressive job-placement statistics, what's deterring college-aged people from exploring a career in welding? Thornhill points to the long-standing stigma that working with your hands means you don't have the intellectual capabilities of those that attend traditional colleges.

"It took me 38 years to realize that's not true," Thornhill says. "Welding opened my eyes to a whole new opportunity to re-evaluate and recalibrate. Learning how to weld helped me get where I am today."

He jokes that as a man with three degrees, he's been the most employed since taking up welding. Thornhill urges prospective students and their parents to look past the surface-level stigma and understand that a career in welding is about science, technology and mathematics.

"I tell my students that they are elite," Thornhill says. "Only one percent of the population knows how to weld. That's the same as being a star athlete or a doctor or a lawyer. That's why you get paid well, can travel and have opportunities to take advantage of some of the things that people with a four-year degree can't." ■