As a little boy, Shane Pendleton spent his time drawing and building structures made out of Legos. He credits these childhood pastimes for bolstering the skills that led him to become a mechanical engineer.

“In junior high and high school, we began taking career placement tests. Those two modes of creativity eventually pointed me toward architecture and engineering. Mechanical engineering has a great blend of drafting and many other engineering disciplines, so that’s what I chose,” he recalled.

While in high school, Pendleton took a job as a contract laborer, where he designed and implemented methods to correct imperfections in house interiors and exteriors, as well as established and constructed property line and privacy fences. His six years as a laborer taught him a great deal.

“One of the most useful things that I learned is an understanding of mechanical systems. For the most part, mechanical systems work in a very logical way. My brain understands and can follow the logic behind why something works like it does, and how it could possibly be improved, so I am more efficient at my task,” he explained. “Another priceless lesson that I learned is how hard work and a good work ethic can pay off. It was really my first difficult job. I went home many nights exhausted only to get up and put in another 10–12 hours the next day. It was very inspiring to see my supervisor working circles around me. It was a challenge to keep up with him, but I eventually succeeded.”

During his time at Oklahoma State University, Pendleton completed a three-month engineering internship with Envirotech Engineering & Consulting Inc., Enid, Okla. He also worked as one of the university’s residential advisors, and then assistant resident director.

After earning a bachelor’s in mechanical engineering technology, Pendleton landed a job as a mechanical engineer with GEFCO, Enid, Okla. His job entailed designing multiple rig, trailer, and hose reel components.

To enhance his value to the company, as well as expand his own hobbies, Pendleton enrolled in a welding class.

“By understanding the process and how a weldment would be efficiently assembled, I had hopes of learning to make more concise and accurate prints for our welders. Additionally, welding would expand my skill set for the personal projects that I enjoyed building, which, until this class, had been limited to wood and bolting connections together,” he said. “It was that class that opened doors to working for my current employer.”

Today, Pendleton is a technical sales representative at The Lincoln Electric Co., Tulsa, Okla., where he helps manufacturers solve their welding problems.

“My engineering background allows me to better understand the forces that act on a particular welded joint and help manufacturers design around it to prevent failures,” he said. “My favorite part of my job is doing something different every day and helping people solve their welding-related issues.”

Pendleton also volunteers with the American Welding Society (AWS) Tulsa Section. His role as the Section’s chair allows him to channel his desire to help others in the welding industry.

“I have a passion for education, and the AWS really focuses a lot of its time developing welders, CWIs, etc., for the next generation. I want to help champion that here in Tulsa,” he affirmed.

Pendleton is proud of the work the Tulsa Section does to support future welders.

“Our section has a great group of volunteers who work in various levels of the industry. Their expertise has enabled the section to hold various plant tours and technical meetings, with the most recent notable events covering submerged arc welding and the care and welding of duplex and super duplex stainless steels,” he explained. “Additionally, we also have annual events focused on raising money for scholarships through golf and skeet shooting.”

Looking to the future, Pendleton hopes to one day earn a master’s degree in business administration, as well as become an AWS Certified Welding Inspector (CWI), to broaden his skill set and increase his usefulness to customers.
District 18 Member Profile

Jorge Enriquez

Jorge Enriquez felt the allure of welding in his teens but didn’t try the craft until after he left the construction industry at the age of 22. The opportunity to learn welding arose when he landed a new job with New Mexico State University (NMSU) as a gas technician’s helper due to his experience with operating heavy equipment and fusing polyethylene (PE) pipe. Because the university offered to pay his tuition, Enriquez decided to expand his professional repertoire by enrolling in the welding program at Doña Ana Community College (DACC), Las Cruces, N.Mex.

“One of the things that motivated me was the money and the history I had with working with natural gas systems,” said Enriquez when asked why he decided to pursue a career in welding. “What’s better than being able to be an all-around guy?”

At DACC, Enriquez fell under the tutelage of David Twitty and Jose “Pep” Gomez, both of whom serve as officers in the American Welding Society (AWS) El Paso Section. A jack-of-all-trades, Enriquez discovered that welding came naturally to him.

“What I like most about welding is that I can build stuff with my hands,” he affirmed.

Enriquez currently holds a welding certificate from DACC. He is qualified in gas tungsten arc welding (GTAW) in all positions (AWS D1.1); GTAW aluminum (AWS D1.2); gas metal arc welding steel plate (ASME Section IX); shielded metal arc welding (SMAW) pipe in all positions (AWS D1.1); SMAW API 1104 on NMSU procedure pipe in all positions natural gas; SMAW API 1104 pipe 0.156 wall natural gas distribution line and pipe 0.218 wall natural gas transmission line for New Mexico Gas Co.; and SMAW API 1104 in-service ¾-in. nipple-welded pipe on a live gas main.

His welding experience includes working in NMSU’s mechanical shop as well as performing structural maintenance as a technician for the university’s welding shop.

“From working in the welding shop at NMSU, I had the opportunity to build and fabricate different structures for the New Mexico Aggies, a baseball and softball team, and the activity center,” he said when asked about the most interesting welding projects he has completed. “In my opinion, they were all cool. It was fun while it lasted!”

According to Enriquez, today he is “living the dream performing in-service welding” for a private contractor.

“My current duties are to trench and excavate for the installation of natural gas mains (PE pipe). Once the PE pipe is installed, my job as an in-service welder is to weld a T.D. Williamson fitting onto the existing steel gas main. All of this is done while the gas main is in service. Once I weld the fitting, I also weld the transition fitting onto the T.D. Williamson 3-WAY™ tee and transition from steel to PE pipe. After that, I continue to hot tap the gas main with the T.D. Williamson T-101 tapping machine. After the new section of PE pipe is pressure tested and in service, I then stop the existing gas main and properly release pressure on the small section isolated, then cut out an approximately 12-in. stub. I weld caps on both ends and abandon the side being replaced by the PE pipe and continue distribution on the remaining side,” he explained.

Although his job is hard work, Enriquez enjoys the thrill and excitement of working with potentially dangerous materials.

“One thing that I love about it is welding on to a gas main with pressure behind it,” he said. “It makes my heart start pumping knowing that at any given moment I can overheat the pipe and punch through. But with knowledge and experience I get the job done in a safe and proper manner.”

To further advance his knowledge, Enriquez is currently working toward an associate’s degree in welding technology at DACC. To help him on his journey, he recently received an AWS district scholarship, which he used to purchase the books and tools needed for the semester.

When he is not busy working in the field or enhancing his knowledge at school, Enriquez tries to get away from the bustle of city life by spending time in the desert. He also enjoys shooting guns with his wife and kids as a hobby.

AWS Welding Handbook Committee Seeks Volunteers

The American Welding Society (AWS) Welding Handbook Committee is looking for volunteers to work on Volumes 2 and 3 of the 10th Edition of the Welding Handbook. Candidates should be recognized subject matter experts in various welding science and technology topics, or a closely related field, such as metallurgy, manufacturing technology, metal fabrication, or design. Ideally, candidates should have 10+ years of experience in their field and possess good technical writing skills. Previous work on AWS documents is desirable. Qualified candidates should send their résumé and contact information to Kathy Sinnes, ksinnes@aws.org.