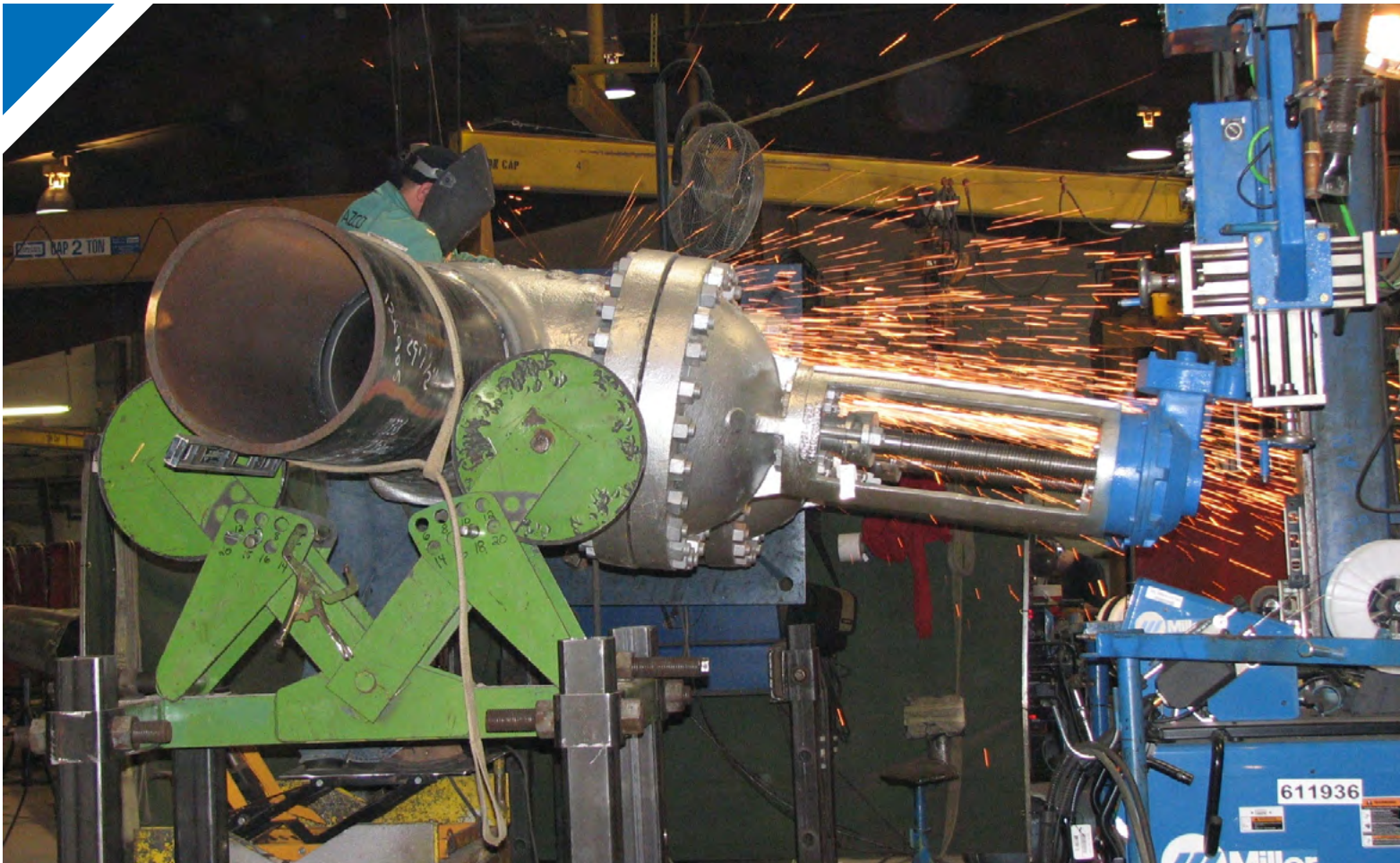


WHITE PAPER / REFINERY CONSTRUCTION AND MAINTENANCE

# MAKING REFINERIES SAFER — APPRENTICESHIP PROGRAMS ARE KEY TO SB54'S MODEL FOR SUCCESS

BY Patrick Choudoir

Since California Senate Bill 54 (SB54) took effect in January 2014, California refineries have been transitioning their construction and maintenance contracts to building trade contractors. The goal has been to increase refinery safety through the use of a skilled, highly trained workforce. SB54's requirement for employing apprentice program graduates helps make that possible.



To help reduce public health and safety risks at California refineries, a new law — SB54 — was enacted in 2014 to help see that skilled and qualified workers perform construction and maintenance in these hazardous work environments.

SB54 requires 60% of a refinery's contract workers to be journeypersons who have graduated from a state- or federally approved apprenticeship program. The law also requires refineries to pay a prevailing wage to these workers, who have typically completed about 8,000 hours of paid on-the-job training, in addition to 500 hours of related classroom instruction, over an approximately five-year period.

The intent of SB54 is not only to create safer refinery environments through these robust employee training and quality standards, but also to help ward off future labor shortages by providing incentives for millwrights, steamfitters, pipefitters and other craftspersons to build careers in these trades. While the law does not preclude nonunion companies from working in refinery environments, these employers typically do not require apprenticeship-level training for their workers, making it difficult for them to meet the law's employment requirements.

## **WHY APPRENTICESHIP PROGRAMS MATTER**

Apprenticeship programs are designed to train workers to become skilled in particular professions. They are available for wide range of trades, from maintenance operators and ironworkers to machinists, carpenters and electricians. Each involves a combination of paid on-the-job training and tuition-free classroom instruction, an approach that has proven over time to be a recipe for success.

While construction-related apprenticeships are typically five years in length, some programs are evolving to address changing workforce needs by offering shorter, more intense training periods or distance learning opportunities and online courses that address younger generations' various learning styles. Many connect apprentices with mentors: established employees who can help manage their expectations, provide counsel on time management and priorities, and help them develop

confidence in their abilities. All are focused on allowing apprentices to gain the education and experience necessary for success in the field.

Candidates for these programs typically must be 18 years of age or older, have a high school or vocational school diploma or GED, pass a math skills assessment and be able to perform the essential functions of the position they seek. In many places, the number of job openings determines the number of apprenticeship opportunities available in each career path in any given year. Retention rates, as a result, are often quite high, with the best programs graduating as many as 95% of the apprentices that begin the program.

The benefits of working with graduates of these programs — as well as apprentices themselves — are numerous.

## **REFINERY AND PUBLIC SAFETY**

Refineries use many toxic chemicals that can affect both employee and public health, and construction and maintenance contractors must be trained to minimize the threat of them being expelled into the air. Apprentice training — including annual refresher courses — is valuable in developing consistency in skills, training and necessary certifications among contractors.

In some cases, contractors that employ building trade workers offer other safety advantages as well. For example, AZCO owns and operates fabrication facilities where pipe is prefabricated before it is shipped to a job site. Safety risks can be more easily managed by minimizing field work.

## **WORKER PRODUCTIVITY**

The experience and training that apprentice program graduates do more than contribute to a safer workplace; they are also linked to greater productivity, reduced recruitment costs and, in the longer term, lower turnover. Refiners that employ trade craftspersons, as a result, typically have fewer skills-related vacancies to fill. Refiners that participate in apprenticeship programs also find they can be a good way to increase workforce diversity by providing access to a larger talent pool. Apprentices can also help address skilled labor shortages

at a time when many baby boomers are retiring, and a new generation of skilled workers are not yet always in place to fill their jobs.

Refiners that take on apprentices can also customize training to the specific needs of their operations, resulting in highly skilled employees. At AZCO, for example, many pipefitter fabricator apprentices are employed in the piping fabrication shop, as well as steamfitters who assist in installing pipes at job sites. Many already have experience working as laborers or in the metal trades.

### EMPLOYEE SATISFACTION

Craftspersons who are graduates of apprenticeship programs appreciate the earnings boost associated with SB54's prevailing wage requirements. The long-term training not only helps prepare a refinery position, but often "locks" an employee into a long-term career.

While apprenticeship programs share similar goals, their success in delivering on these objectives often varies. Refiners who are still relatively new to working with maintenance and construction companies that employ trade craftspersons — including graduates of apprentice programs — are encouraged to learn as much as possible about the local apprenticeship programs.

When possible, it is beneficial to take an active role in shaping the program and encouraging contractors to hire apprentices. That is one of the best ways to create a safe work environment staffed by a highly trained workforce attuned to the refiner's needs.

### BIOGRAPHY

**PATRICK CHOUDOIR** is director of fabrication for AZCO. He also serves on the apprenticeship committee for UA Local 400 Plumbers & Steamfitters, where he mentors apprentices.

### ABOUT AZCO



AZCO is a 100% employee-owned heavy industrial construction and fabrication solutions provider that builds the critical infrastructure needed to keep communities and industries thriving. Part of the Burns & McDonnell family of companies, we work with more than 750 union craft personnel across the country using an integrated approach to deliver more advanced controls and predictable outcomes. Learn how we are designed to build at [azco-inc.com](http://azco-inc.com).