

Superior Medical Gas Training Saves Lives

George Bliss

During the last decade and a half, industry standards for the installation and maintenance of medical gas lines have evolved considerably, and they continue to do so. The United Association (UA) has always been at the forefront of the push to improve and ensure standards, through strong internal training programs as well as outreach programs promoting the use of qualified professionals in planning, constructing, and maintaining medical gas systems.

The UA has approximately 25,000 members certified as medical gas installers and brazers. That number continues to grow, with journeymen and apprentice plumbers and pipefitters being trained in every state in the United States, as well as in Canada.

This training—above and beyond the requisite professional training of our intensive apprenticeship program—consists of at least 32 hours of instructional time. The instructors of all courses have had an additional 40 hours or more of instruction in medical gas installation and have participated in the UA Annual Instructor Training Program.

The training is devoted to a full understanding of American Society of Safety Engineers (ASSE) Standard 6010 and National Fire Protection Association (NFPA) Standards 99c and 50, as well as the skills necessary to meet these standards. It includes comprehensive coverage of field installation, permits, drawings, proper equipment and material use, brazing technique, pressure and cross-connection testing, and Levels 1–4 systems. Third-party testing by National ITC Corporation provides outside verification that UA installers have mastered the skills and knowledge necessary to produce quality work.

While the UA certainly is not the only organization training medical gas installers, we believe that the size of our program and the scope of our commitment set us apart. Others have taken note as well. The UA has “made a serious commitment to training in medical gas,” says Mike Massey, executive vice president of National ITC. “That is a type of work the UA excels in.”

Our push for improved standards began in earnest in the mid-1980s, in large part due to the inability of existing medical gas systems in North America to stand up to disasters like the Mexico City earthquake of 1985. While structural improvements in buildings allowed healthcare facilities to withstand considerable stresses, medical gas systems were not so rugged. “When patients are in recovery on a ventilator, those gases are pumped into the ventilator,” says UA Representative Brian MacDonald. “So it’s quite critical. The installation has to be strong enough to hold up in case of an emergency.”

MacDonald has been instrumental in the UA’s efforts to raise both internal standards and the standards set forth by ASSE and NFPA. Medical gas training and standards are an important priority for the UA nationwide. While we truly believe that plumbers and pipefitters protect the health of the nation in all that they do, in few areas are precision and cleanliness so critical to the survival of our citizens during their most vulnerable moments.

Our push for new and improved standards continues, facilitated by accelerated technological advancements. We intend to submit a new welding process for joining copper as an alternate technique under medical gas codes and standards. We believe

this technique will provide a cost-effective alternative, especially on large projects that require large-bore copper pipe.

Our commitment to medical gas piping training extends beyond top-notch training programs and involvement in the development of industry-wide standards. The UA has built three mobile medical gas trainers. The trainers were made possible by a UA grant, and they are operated in conjunction with state pipe trade associations and Piping Industry Progress & Education (PIPE). Based in Philadelphia, Florida, and California, the trainers incorporate all components of a medical gas system, from gas supply and delivery mechanisms to a patient bed. They are intended to promote high standards for medical gas installation and maintenance through education, because we know these standards save lives.

As standards continue to evolve and the demand for qualified installers grows with the explosion of healthcare facilities needed to care for an aging North American population, the UA’s commitment to training in medical gas has never been stronger. To learn more about our program or locate certified installers, please contact the UA local union in your area. ■



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