



Training

The Swagelok® Tubing System Training Program

A globally standardized workshop designed to give your team thorough instruction on industry best practices for ensuring high-integrity tubing systems.

Our training was originally designed to address the International Oil & Gas Producers Association (IOGP)'s JIP33 **"Standardization of Equipment Specifications for Procurement"** requirements for the design, material selection, installation, inspection, testing, and marking of tubing sizes up to 2 in. However, we saw a need to offer standardized training programs across different industries and applications.

No matter your industry, this hands-on training is ideal for installers, engineers, designers, QC/QA inspectors, and others responsible for designing, installing, maintaining, and/or inspecting tubing systems. This Swagelok training is designed to cover how to install a ferrule tube fitting, inspection, tube bending, and other relevant topics.

Currently, our Tube System Training Program is available for several industries:

- Oil and Gas
- Chemical and Refining
- Hydrogen Applications

Swagelok Advantage

Each course is facilitated by a Swagelok-certified subject matter expert and provides theoretical and practical experience through a combination of explanation, demonstration, hands-on exercises, and validation

Certificate of Completion

All attendees receive a Swagelok certificate of completion, subject to successful completion of both a practical and theoretical exam. The certificate is valid for three years. For added assurance, training certificates are tracked using a centralized Swagelok Customer Training Records System, enabling those who completed the course and their employers quick and easy verification of training records.

How to Register

Learn more about the relationship between installation requirements and safety in the workplace with our industry-specific standardized training programs. Contact your local authorized Swagelok sales and service center for more information and details on registration.



The Swagelok® Tubing System Training Program for Hydrogen Applications

One of the most formidable challenges in the development of safe, dependable, and leak-tight hydrogen fluid systems is the nature of hydrogen itself. Hydrogen is a small-molecule gas that can easily escape through the tiniest of crevices and diffuse into the materials designed to contain them. In many industrial applications, hydrogen must also be stored at pressures in excess of 700 bar for maximum cost efficiency and to achieve the necessary energy density. Further, the handling and management may require rapid thermal and pressure changes can also impact system integrity.

Building fluid systems designed to overcome these challenges requires the right components, the right materials, the right expertise, and the right training. That is why we developed the Swagelok® Tubing System Training Program for Hydrogen Applications (SWAGE-TSTP-H2). This program provides hands-on training for those responsible for designing, installing, maintaining, and/or inspecting hydrogen tubing systems.



About the Course

This training program is designed to provide knowledge and understanding of:

- What is hydrogen?
- Hydrogen compatible materials
- Risk mitigation and best practices
- Tube fitting installation
- Tube bending
- Tube fitting installation inspection
- Higher pressure module
- FK medium pressure tube fittings
- Cone and thread fittings
- Leak testing



Target Audience

This hands-on training is ideal for installers, technicians, engineers, designers, QC/QA inspectors, and others responsible for designing, installing, maintaining, and/or inspecting tubing systems in hydrogen and small molecule gas delivery systems.



Course Format

Designing, engineering, installing, and maintaining a high-performance hydrogen tubing system for maximum safety and integrity means starting with the basics. That is why this training program provides in-depth, comprehensive focus areas beginning with a foundational understanding of hydrogen and progressing through critical aspects such as materials science, installation, tube bending, and fitting technologies.



Course Duration

The Swagelok® Tubing System Training Program for Hydrogen Applications is a day-and-a-half, in-person workshop.