



## Tube Fitting Installation, Fitting Safety and Tube Bending Training

### Swagelok Los Angeles

2184 West 190<sup>th</sup> Street  
Torrance, CA 90504  
Rich Sweeney, Cell # (562) 755-0184

### Tube Fitting Installation and Safety

Tube fittings and their usage are seldom given much thought until there is a failure in the system. For most customers a failure is normally defined as a leak. The consequences of a leak can range from a minor inconvenience to a significant event requiring immediate attention and repair. History has demonstrated that by employing the techniques provided in the Swagelok Tube Fitting Installation training, most of this leakage can be prevented. The purpose of this course is to educate, train and test all participants in the safe selection, installation and utilization of tube fittings and tubing to assure 100% reliability.

#### **Course Objectives:**

When finished, all attendees should:

- ◆ Understand proper installation procedures through practical exercises (i.e., initial installation and remake procedures, preswage, gageability and troubleshooting, etc.)
- ◆ Know the differences between tubing vs. piping - advantages and disadvantages of each.
- ◆ Understand the proper selection of tubing using tubing data tables.
- ◆ Be aware of proper care and handling practices of tubing and tube fittings.
- ◆ Understand the relationship between installation requirements and safety in the workplace.
- ◆ Have a working knowledge of assorted Swagelok tools and fitting products designed to make the installation easier and more efficient.

### Basic Hand Tube Bending

Tube bending, for the most part, is a skill that is normally passed from a craftsman to his apprentice. It is not a skill that is typically taught in schools or published in textbooks. As a supplier of high quality tube benders and tube preparation tools, we offer this class to provide a training resource that demystifies one aspect of fluid system fabrication. Good tube fabrication techniques can improve system performance. Good layout and execution can enhance the aesthetics of a system and reflect on the quality of the product. Knowledgeable, skilled technicians help increase productivity and reduce waste and scrap. The purpose of this portion of the course is to educate, train and certify all participants in the basics of tube bending.

#### **Course Objectives:**

When finished, all attendees should:

- ◆ Be able to identify the tube bender components and be able to maximize their use.
- ◆ Have a basic working knowledge of tube bending procedures through practical tube bending exercises (i.e., proper tube preparation and care, bender set-up, spring back, determining changes in direction and plane, adjustment for gain calculations and offset bend formula, etc.).

### Workshop Requirements:

- Time: Length and content of workshop can be customized to accommodate attendees' allotted time and interests; typically between 2 – 5½ hours.
- Facility: Room with standard electrical outlet for laptop PC and projector.
- Equipment: All equipment and training materials will be provided by instructor including hand tools, fittings and tubing and associated support materials.
- Size: Works best with 6 - 10 attendees per workshop, however adjustments can be made to accommodate your specific requirements.
- Tuition: From \$140 - \$300 per attendee depending on length and content of class.

***All attendees will receive a "Certificate of Participation"***