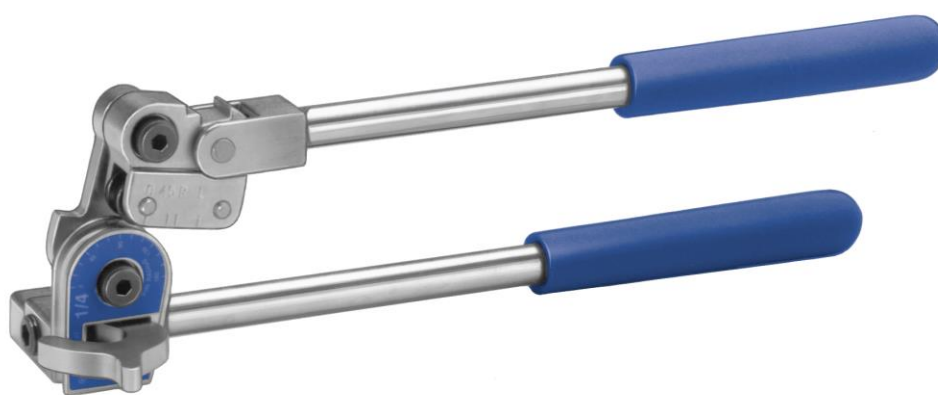


# Tube Bending Seminar



## Swagelok Northern California Formal Training Program

Tube bending, for the most part, is a skill that is normally passed from a craftsman to his apprentice. It is often not a skill that tube fitters learn in schools or through textbooks. Many individuals who are considered expert tube benders have learned the craft through years of hands-on experience.

It is a skill you learn by doing. Why? Because

many craftsmen tell us they have never seen the published instructions that come packaged with a new tube bending tool. So the only way they could learn was through trial and error.

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For additional information regarding the  
***Tube Bending Seminar***,  
please contact Swagelok Northern California at:  
**[jhopkins@swagelok.com](mailto:jhopkins@swagelok.com)**

# We offer this class to provide a training resource that demystifies one aspect of a fluid system

Good tube fabrication techniques can improve system performance. Good layout and execution can enhance the esthetics of a system and reflect on the quality of the product. Knowledgeable, skilled technicians help increase productivity and reduce waste and scrap.

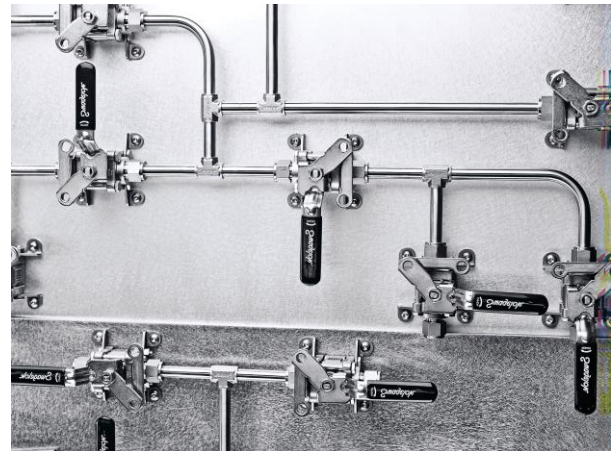
The class is a hands-on, lecture-lab that presents Tube Bending in an easy to understand format. Students gain practical experience using tools-of-the-trade. We focus on tube bending fundamentals providing the student with a foundation upon which he can build his expertise.

The following topics are covered:

- Introduction to tube preparation, care and handling.

- Familiarization with the tube cutter, tube deburrer, and tube benders.
- Discussion of the impact workmanship has on total system performance.
- A glossary of tube preparation and handling terminology.
- Exercises that teach techniques for determining the “exact” length of tubing needed to complete a job.
- Exercises that demonstrate time saving fabrication techniques.
- Exercises that explain the use of expansion loops and off-sets.

The course objectives are accomplished through the use of graphic illustrations and the



hands-on use of tools employed in the field.

The class is designed for anyone who works with tubing, including but not limited to, the fabricators, contractors and technicians who assemble the systems. Engineers and draftsmen who design tubing systems have profited from a better understanding of the capabilities and limitations of bent tubing systems.

## Each student receives:

- ✓ Several useful reference materials
- ✓ Job-aids that simplify tube fabrication and bending.
- ✓ A certificate of completion that certifies completion of the tube bending training.

## Class Details

The class is 1-1/2 to 2 hour lecture-lab. The length depends on the degree of interaction between student and instructor. The training can be accomplished at the customer's facility to minimize the impact of key personnel being away from the plant.

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[jhopkins@swagelok.com](mailto:jhopkins@swagelok.com) for additional class information.