

Swagelok Training Services

Swagelok certified training courses deliver practical and theoretical industry skills to improve efficiency and safety at your facility.

With all industries demanding not only zero harm workplaces but more importantly, zero business risk, it is essential that our workforces are equipped with the necessary skills to perform their tasks in a safe and reliable manner.

As the leading supplier of fluid system components, we recognise the importance of training all of your staff that interact with fluid systems and their componentry. This can include but not limited to; the proper installation practices for tube fittings, proper tube handling and preparation, thread identification and tube bending techniques.

Our training programs have been developed in conjunction with many industry types, over many years and are recognised globally as the industry standard for training in all types of fluid system installations.

We are proud of these training programs and feel they are a vital part of how we can work together with our customers to support a safe and efficient learning and working environment.

Kevin Hurrel

Managing Director

Swagelok Eastern Australia & New Zealand



Eastern Australia and New Zealand

Your Complete Training Partner

Swagelok offers a complete range of training courses to those involved in the design and installation of Small Bore Tubing Systems (SBT).

For the Engineer/Designer, these courses provide up to date industry best practice design principles.

For Installers, industry recognised and certified training will assist in reducing installation time and waste, while increasing operation safety of SBT systems.

These courses can be blended together into a tailored curriculum for your staff and in collaboration, a roll-out plan developed to ensure the training achieves maximum impact for your facility.

There are three levels of courses available;

Industry Focused Training

Certified Installation Training

Specialised Training Events

Industry Focused Training



Swagelok Eastern Australia & New Zealand provide Industry Focused Training to elevate the expertise of your team, helping improve reliability, uptime and performance while reducing costly errors around improper installation and leakage.

These courses are 30-45 minutes in length.

[Enquire Now](#)

Pressure Regulators

Topics include:

- How Regulators function
- Characteristics of Regulators
- Pressure Reducing vs Back Pressure
- Loading & Sensing element type

Popular Course



Gas Distribution

Topics include:

- Understanding Gas Distribution systems
- Typical challenges in design and maintenance
- Styles of assemblies available
- Understanding safety and operational benefits



Analytical Instrumentation

Topics include:

- What is Analytical Instrumentation?
- Common causes of unreliable data
- Three key factors for good system design
- Understand typical sample system components



VCO & VCR Fittings

Topics include:

- Understanding VCO & VCR fundamentals
- Sealing types - gaskets & o-rings
- Safe installation procedures
- Typical problems & troubleshooting



Grab Sampling

Topics include:

- Why do we Grab Sample?
- Principles of Grab Sampling
- Sampling Points - Where & Why?
- Typical Grab Sample designs



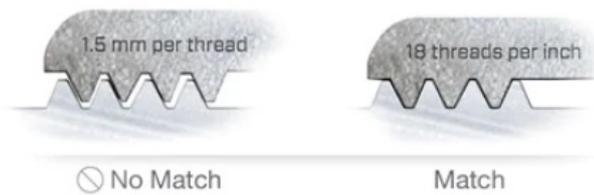
Industry Focused Training

Thread Identification

Topics include:

- Thread terminology & identification
- Installation of threads
- Problems with threaded connections
- Proper lubricants & sealants

Popular Course



Hose Selection

Topics include:

- Why use hose and where do we use it?
- Hose core materials of construction
- Installation best practices
- Understanding hose options (tagging, testing etc)



Corrosion

Topics include:

- Corrosion types and causes
- How to identify corrosion potential?
- What is sour gas? Who is NACE?
- Behaviour of materials in sour gas applications

Popular Course



Valve Selection

Topics include:

- The 5 valve functions available
- System parameters that affect valves
- Valve construction & options available
- Safeguarding and maintenance

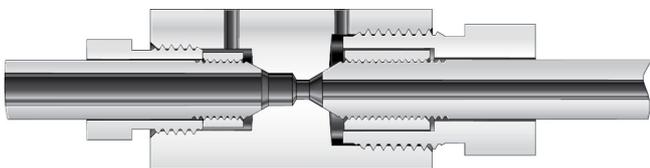
Popular Course



Cone & Thread Fittings

Topics include:

- Component selection & identification
- How to install correctly
- Coning & Threading tools
- Installation problems & troubleshooting



Process Interface Valves

Topics include:

- What are Process Interface Valves
- Understanding conventional process interface valves
- Advantages in design
- Application and design considerations



Tube Fitting & Tube Bending Essentials



Our goal is to provide our students with the skills, tools and knowledge necessary to make every Small Bore Tubing (SBT) system they design and install safe, reliable and trouble-free.

This seminar is widely recognised throughout industry, not only as an initial training program, but also as a three yearly refresher course to all personnel involved in SBT system installation, both in instrumentation and process installation applications

[Enquire Now](#)

Highly Recommended!

"Our training and education facility has been utilising the services of Swagelok for over 20 years.

Their expertise sets the industry standard for training and instruction on safe and reliable tube fitting installation and tube bending.

I couldn't recommend a more valuable and practical course."

Mark Hyett

Instrument Teacher
Central Gippsland Institute of TAFE



Course Details

Duration & Price: Full Day at \$495 per attendee

Participants: 10 Maximum

Seminar Style: Seminars are conducted in an open style with attendees encouraged to participate with both questions and "Hands-on" practical demonstrations.

Venue/Equipment: A room with projector screen and whiteboard is preferred. We will provide all appropriate tooling, tube and fittings necessary for the practical component of the training.

Supplied Materials:

- Swagelok Writing Compendium
- Swagelok Pocket Installers Guide
- Swagelok Marker Pen
- Swagelok Gap Inspection Gauge

Suitable Attendees: This seminar has been developed specifically for anyone involved in the design, installation, fabrication or maintenance of fluid systems.

Engineers will benefit from the in-depth review of fundamental installation procedures. Quality Control and Safety Engineers will gain insight into component limitations and maintenance requirements.

Assessment: Participants are given a comprehensive theoretical examination at the completion of this course.

All graduates receive a certificate and wallet sized card, used as an identifier of competency attained. Both certify the successful completion of the course.

Skills Obtained

- Understanding pressure and temperature variables in Small Bore Tubing systems
- Proper tubing preparation to prevent system contamination
- Correct installation of tubing, tube and pipe fittings



Learning Outcomes:

- Apply time saving fabrication techniques
- Reduce tubing waste from incorrect bending
- Save time and resources during scheduled shutdowns and unplanned maintenance
- Attendees will gain a vital understanding of Small Bore Tubing system installation providing safe, reliable and cost effective installations.

Tube Fitting Installation & SBT Inspection



The Swagelok Tube Fitting Installation Inspection Essentials course is designed to teach attendees how to mitigate and minimise the risk of leakage, through proper small bore tubing system inspection.

Engineers, Supervisors and Operators can attend, enables them to identify incorrect installations in the field to improve safety and system efficiency.

[Enquire Now](#)

Course Details

Duration & Price: Full Day at \$495 per attendee

Participants: 10 Maximum

Seminar Style: Seminars are conducted in an open style with attendees encouraged to participate with both questions and “Hands-on” practical demonstrations.

Venue/Equipment: A room with projector screen and whiteboard is preferred. We will provide all appropriate tooling, tube and fittings necessary for the practical training.

Supplied Materials:

- Swagelok Inspection Gauge
- Swagelok Pocket Installers Guide

Suitable Attendees: The class is designed for anyone who works with tube fittings, including but not limited to, the fabricators, contractors, operators, engineers and technicians who are responsible for the integrity of any fluid system installation.

This course is also beneficial to those who oversee the installations of other people, to ensure integrity and safety.

Assessment: Participants are given a comprehensive practical examination at the completion of the training in order to prove their level of competency. All graduates receive a certificate and wallet sized card, both used to certify the successful completion of the course.

Read the “heartbeat” of your plant!

“Small bore tubing systems are a vital part of reading the “Heartbeat” of your facility.

Ensure these systems have been installed to provide long term system integrity, leveraging the best up-to-date industry practices. That’s the foundation of this course”



Rob Nyhuis

Training Principal
Swagelok Eastern Australia & New Zealand

Skills Obtained

- Understand common errors with tube fitting leakage
- Visualise and understand tube bending defects
- Identify proper fitting installation and techniques
- Understand pipe thread installation and terminology
- Identify static and dynamic loads on SBT systems

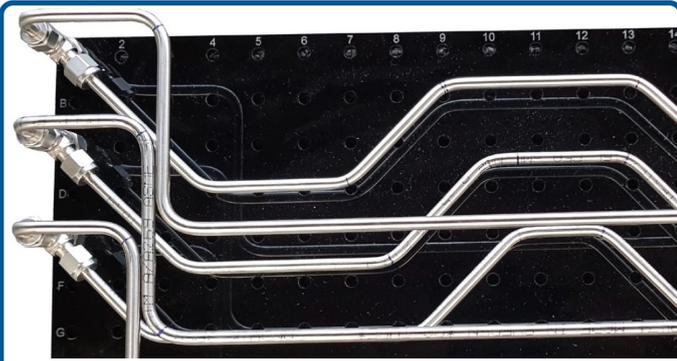


Swagelok Field Engineering also perform inspection Services

Learning Outcomes:

- List common errors leading to tube fitting leakage
- Identify correct tube system design practices
- Install & inspecting tube fittings correctly
- Identify mixed material fittings
- Validate correct pipe thread usage and assembly
- Understanding dynamic and static loads and the potential for failure on SBT systems

Advanced Tube Bending



Our goal is to focus on the many different elements necessary to assure accurate and proficient tube bending.

This seminar is designed with installers, designers and fabricators of Small Bore Tubing Systems (SBT) in mind, to improve operation & performance and help reduce costs with tubing waste, primarily due to bending dimensional errors.

[Enquire Now](#)

From basic to complex bending!

"My tube bending skills were basic, taking multiple attempts to get it right prior to attending the Advanced Tube Bending course.

I now have the knowledge and ability to complete complex, multi-bend configurations.

10 out of 10 Rob!"

Carmel Jenkinson

Instrument & Electrical Dual Trader
Energy Australia



Course Details

Duration: Full Day at \$595 per attendee

Participants: 6 Maximum

Pre-requisite: Attendees must have completed the Tube Fitting & Bending Essentials full day seminar.

Seminar Style: Seminars are conducted in an open style with attendees encouraged to participate with both questions and "Hands-on" practical demonstrations.

Venue/Equipment: A room with projector screen and whiteboard is preferred. We will provide all appropriate tooling, tube and fittings necessary for the practical component of the training.

Supplied Materials:

- Swagelok Training Resource Manual

Suitable Attendees: This seminar has been developed specifically for anyone working with tubing systems, whether as fabricators, contractors or technicians.

Engineers and draftsman who design tubing systems have profited from a better understanding of the capabilities and limitations of bent tubing systems.

Assessment: Participants are given a comprehensive theoretical and practical examination at the completion of this course.

All graduates receive a certificate and wallet sized card, used as an identifier of competency attained. Both documents certify the successful completion of the course.

Skills Obtained

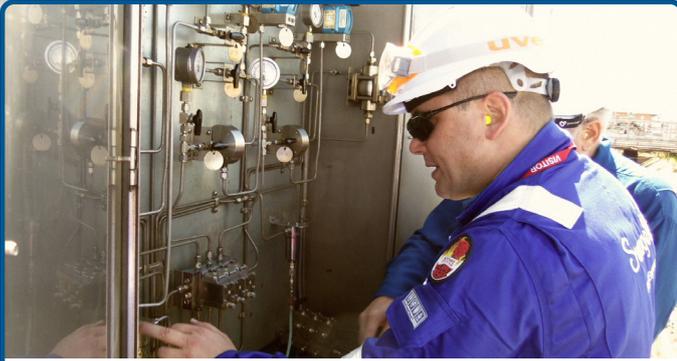
- Tube Preparation
- Various tube bend methods
- Offset bending
- Multiple tube runs



Learning Outcomes:

- Understand which method of tube bending can be used to suit the scope of work.
- Attendees will be able to apply the pre-measure bending method, allowing them to pre-bend a tube run prior to installation.
- Attendees will be equipped with the knowledge to run multiple tube runs of various angles.
- Attendees will have hands on, practical exposure to the learning outcomes during the course.

Analyser Technician Training



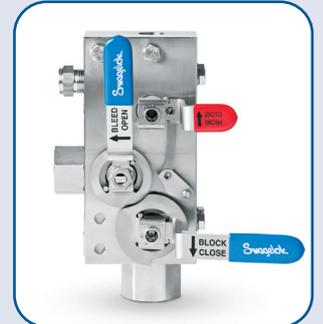
The Analyser Technician Training course will equip attendees with sample system troubleshooting techniques. Attendees will learn to diagnose and eliminate common sample system design flaws that result in erroneous data which lead downtime associated with analyser calibration. This can improve process efficiency and increases profits.

[Enquire Now](#)

Driving Improvements In Sampling!

"The course syllabus was very well presented with the essentials of sampling well covered."

ATT Training has proved very valuable to our organisation to drive improvements in our sampling system applications"



Keith Hoffmann

QMI Engineer
VIVA Energy

Course Details

Duration: 2 Full Days at \$995 per attendee

Participants: 6 Maximum

Seminar Style: Seminars are conducted in an open style with attendees encouraged to participate with both questions, "Hands-on" practical demonstrations and a Site-Walk of a installed sample system.

Venue/Equipment: A room with projector screen and whiteboard is preferred. We will provide all appropriate tooling, tube and fittings necessary for the practical component of the training.

Supplied Materials:

- Swagelok Training Resource Manual

Suitable Attendees: This seminar has been developed specifically for those involved in the design and installation of sample systems along with those who are specifically responsible for on-site analysers and their maintenance.

Assessment: Participants are given a comprehensive theoretical and practical examination at the completion of this course.

All graduates receive a certificate and wallet sized card, used as an identifier of competency attained. Both documents certify the successful completion of the course.

Skills Obtained

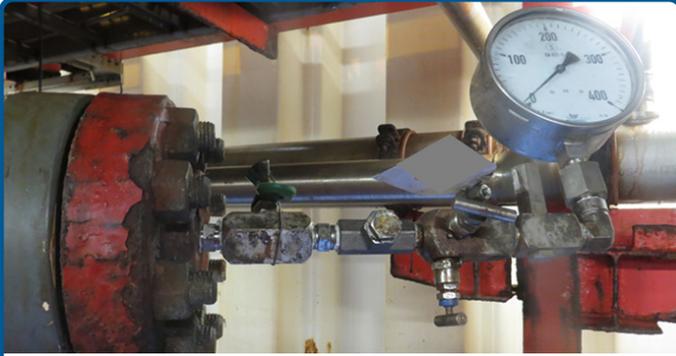
- Understanding sampling goals of timely, representative and compatible.
- Identify safety hazards in sampling
- Understanding operational goals of safe, reliable and cost effective sampling
- Sample system troubleshooting techniques



Learning Outcomes:

- Identify and mitigate safety hazards associated with sampling
- Understanding all the sample system components and how they interact to produce sample results
- Calculate lag time and identify improvements to ensure timely samples
- Ability to apply problem solving techniques to assist in recognising design faults that lead to inaccurate sampling results

Small Bore Design Elements



This training course has been developed to provide awareness and understanding of industry guidelines and associated best practices in relation to the design deliverables of Small Bore Tubing Assemblies.

Attendees will be provided with the knowledge necessary to design and install safe, reliable and trouble-free Small Bore Tubing systems.

[Enquire Now](#)

Course Details

Duration: Full Day at \$495 per attendee

Participants: 6 Maximum

Pre-requisite: Attendees must have completed the Tube Fitting & Bending Essentials full day seminar.

Seminar Style: Seminars are conducted in an open style with attendees encouraged to participate with both questions, "Hands-on" practical demonstrations and a Site-Walk to check an installed small bore tubing system.

Venue/Equipment: A room with projector screen and whiteboard is preferred. We will provide all appropriate tooling, tube and fittings necessary for the practical component of the training.

Supplied Materials:

- Swagelok Training Resource Manual

Suitable Attendees: This seminar has been developed specifically for fabricators, contractors or technicians.

Engineers and draftsman who design tubing systems have also profited from a better understanding of the capabilities and limitations of bent tubing systems.

Assessment: Participants are given a comprehensive theoretical and practical examination at the completion of this course.

All graduates receive a certificate and wallet sized card, used as an identifier of competency attained. Both certify the successful completion of the course.

Extensive, Global Expertise, For You.

"The SBT design elements course references the Energy Institute Guidelines in the UK and International Association of Oil & Gas producers.

"This course will keep your company up to date, leveraging the extensive, global experience of Swagelok Company"



Rob Nyhuis

Training Principal

Swagelok Eastern Australia & New Zealand
(30 Years Training Experience)

Skills Obtained

- Selecting appropriate tubing for requirement
- Following best practice principles for tube bending
- Assemble, install and re-install tube fittings
- Identification of thread types and installation
- Identifying static and dynamic loads on SBT systems
- Understand vibration fatigue in SBT systems



Learning Outcomes:

- Small Bore Tubing (SBT) system considerations and parameters
- Understanding static and dynamic loads and the potential for failure on SBT systems
- Understanding large scale deformation
- Importance of material selection in design stage
- Process & Instrumentation valve selection

Orbital Welder Training



The Swagelok Orbital Welding System provides, efficient and repeatable welding for your critical system installations.

This course is designed for those working directly with the Swagelok M200 Orbital Welder, teaching your staff how to safely use the system to make the highest quality welds, with this specialised industrial welding system.

[Enquire Now](#)

Course Details

Duration: Full Day at \$995 per attendee

Participants: 6 Maximum

Pre-requisite: There is no pre-requisite for this course.

Seminar Style: Seminars are conducted in an open style with attendees encouraged to participate with both questions and “Hands-on” practical demonstrations.

Venue/Equipment: A room with projector screen and whiteboard is preferred. 15 Amp power supply is required and large bench space for welder operations. Customers must provide their own Argon Gas Bottle.

Supplied Materials:

- Swagelok Training Resource Manual

Suitable Attendees: This seminar has been developed specifically for anyone working directly with tube welded systems, whether as fabricators, contractors or technicians.

Assessment: Attendees participate in an extensive practical component in the Swagelok Orbital Welder Training, successful attendees will effectively complete this practical training at a competent level.

All successful graduates receive a certificate and wallet sized card, used as an identifier of competency attained. Both certify the successful completion of the course.

A Highly Valued Experience!

“I’ve been delivering Swagelok Orbital Welding Training since 2005 and the confidence we deliver to customers is amazing.

We’ve trained people who’ve never used a welder before, to use this precision tool effectively and safely, creating significant value for our customers”



Michael Whawell

Orbital Welding Trainer

Swagelok Eastern Australia | New Zealand

Skills Obtained

- Understanding Gas Tungsten Arch Welding
- How to operate the M200 Power Supply
- Set up and operating Orbital Welding System
- Troubleshooting issues that may occur



Learning Outcomes:

- Attendees will understand how to set up the welder
- Proper tubing preparation for effective welds
- Understand purging set up
- Understand how to program weld schedules
- Be able to edit a weld schedule and save
- Understand how to inspect for quality welding
- Understand what weld defects can occur and why they have occurred.

Frequently Asked Questions

How does Swagelok training help my company?



Whether it's hydrocarbons, high pressure fluids, gases or simply compressed air, any loss of containment from a Small Bore Tubing system should not be tolerated. Industry recognise that one of the main contributors to loss of containment of SBT systems is the lac of training for installation personnel.

All Swagelok courses can be tailored into a personalised curriculum that can be delivered to you and your team over weeks, or months, depending on your availability, which helps create a culture of learning and installation excellence.

Training is a proven way to improve safety, reduce leakage and fugitive emissions and helps to improve the operational performance of your facility and studies have shown, taking a proactive position on training leads to better staff engagement, productivity and morale.

How long does the certification last?

Swagelok Certified Training validates the successful completion of the course for 3 years from the date of completion.

I want more than one course, is that ok?

Yes, Swagelok courses can be bundled to include several courses into one event (time permitting) or across several weeks as you desire. We can customise to suit your needs.

Who should attend these events?

All our courses are designed to educate your team on product knowledge, application dynamics and installation best practices. These courses are applicable to anyone designing, installing or maintaining pressurised fluid systems, inclusive of liquid and gas applications.



Fluid System Evaluation Services

Swagelok now offer Fluid System Evaluation Services, should you not have the time or expertise to adequately evaluate your own existing pressurised systems.

This service can help to;

- Identify system leakage on-site and help reduce risk of injury and improve safety
- Identify and minimise fugitive emissions to reduce costs associated from lost media/gas
- Help our environment by reducing emissions
- Review current installations practices to extend plant life and reduce the need for regular maintenance
- Improve the operational performance of your facility

Swagelok Training & Field Services are revolutionising the operational excellence of facilities across Australia & New Zealand. Contact us to discuss your needs.



ea.swagelok.com

Or contact us, for more info
SEANZtraining@swagelok.net