ONE SWAGELOK SERVING THE WORLD

SWAGELOK IS AVAILABLE IN MORE THAN 70 CONTRIES THROUGH 225 SALES AND SERVICES CENTERS





SWAGELOK THAILAND

M.J. BANGKOK VALVE AND FITTING CO.,LTD

KINGKAEW, SAMUTPRAKARN BRANCH TEL: +66 (0)2062 1599

SWAGELOK® CUSTOM SOLUTIONS

M.J. BANGKOK VALVE AND FITTING CO.,LTD MAP-THA-PHUT, RAYOHNG BRANCH TEL: +66 (0)3860 8303

SWAGELOK MYANMAR

M.J. MYANMAR CO.,LTD TEL: (95) 1230 5461 MOBILE: (95) 9955 632 549

EMAIL: SWAGELOKTHAILAND@MJBANGKOK.COM WEBSITE: HTTPS://THAILAND.SWAGELOK.COM



ABOUT SWAGELOK

SWAGELOK COMPANY – A GLOBAL LEADER IN FLUID SYSTEM SINCE 1947

Legacy of Quality and Integrity

In 1947, our company was founded by Fred A. Lennon, whose goal was to "make the best product possible to help customers succeed, and keep making it better."

For more than 70 years, our associates have helped us keep that promise and live up to that ideal. We are linked by shared values, including our strong sense of integrity, which guide our behaviors and drive our shared success.

We are proud of all that we have accomplished, and we remain focused, connected, and inspired to continue making things better for our customers, communities, and associates.



MISSION

Apply our collective talents with understanding and passion to improve each day.

Swagelok Thailand, we are Swagelok authorized sales and service center in



Thailand, Myanmar and Laos"

VALUES

Quality

Provide high value and high performance in our products, processes and services.

Integrity

Choose to do the right thing with courage and character.

Respect for the Individual

Commit to the success of each associate through an environment where people are trusted, respected, and treated fairly.

Customer Focus

Create value for the customer to create value for Swagelok.

Innovation

Challenge conventional wisdom to create new value for the customer.

Continuous Improvement

Systematically do things better.

MILESTONE



Established of M.J. Bangkok Valve and Fitting Co., Ltd



New branch in Map Ta Phut, Rayong



Established of Swagelok® Custom Solution to fulfill an assembly service



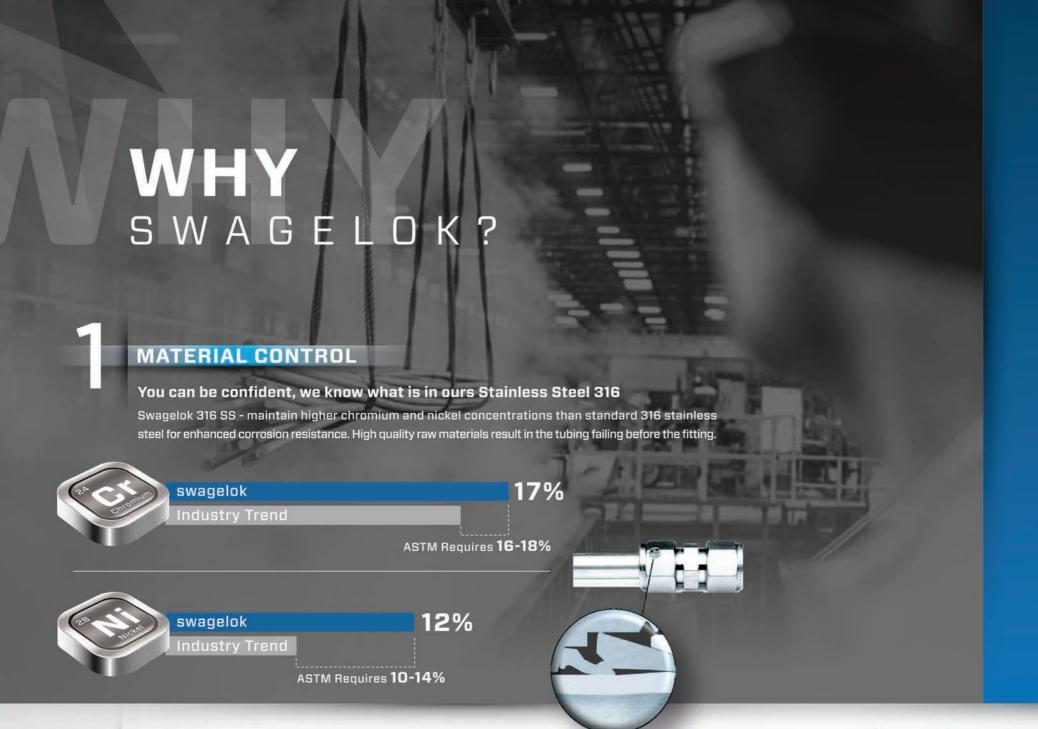
New branch in Yangon, Myanmar



Expanded Service Capability for Onsite and Site Supervision Services

VISION

Truly understand our customers'



Swagelok, we have Unique Twin Ferrule Design with difference control in our material quality. This is why we do NOT warranty for Intermix/Interchange.



INTERMIX

Tube fitting components, which include the nuts, ferrules, and bodies, from two or more fitting manufacturers that are mixed together and then assembled to make a complete fitting.

INTERCHANGE

A tube fitting manufactured by one company that has been installed on a piece of tubing is then disassembled and the tubing, nut and ferrules from that installed fitting is reassembled into the body of another manufacturer.

Why Swagelok do NOT allow to intermix tube fitting components from different manufacturers?

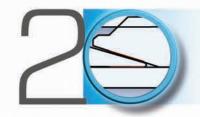
There is no commercial design standard that exists for fitting components. Each company makes components to its own design standard. Swagelok, we have our own superior tube grip with Swagelok's patented hinging-colleting back ferrule design that translates axial motion into radial swaging action on the tube, yet. Interchanging and intermixing tube fitting components will cause unpredictable performance, may increase cost and can be dangerous in critical applications.

- Each manufacture has a unique design
- Difference in material control
- Difference in method of manufacture and hardness profile

DESIGN

Swagelok, we have a unique twin ferrule design with SAT 12-patented hardened surface delivers extraordinary hardness while retaining ductility and corrosion resistance.

TUBE GRIP



GAS SEAL



VIBRATION RESISTANCE "No manufacturer can reliably and uniformly replicate the products of another, Intermixing/interchanging components from other manufacturers voids Swagelok's limited lifetime warranty"

NO DESIGN STANDARD

No commercial design standard exists for fitting components, unlike certain automotive and pipe fittings for which commercial design standard exist. There are many different designs and design variations.

NO VALIDATION TESTING

- Tube fitting tests of Intermix/ Interchange do not cover all the bases. Often only short term burst tests or low pressure gas test on small samples and limited configurations.
- Tube fitting test of Intermix/ Interchange. Do not cover all the combinations.

NO ACCOUNTABILITY

- Intermixed/Interchanged tube fittings are essentially new designs, which are invalidated.
- Intermixing/interchanging tube fittings components can cause unpredictable performance may increase cost and can be dangerous in critical applications.

3 WHY SWAGELOK?



SAT12™ is Swagelok's patented method of heat treating or low-temperature carburization process for austenitic stainless steels

- : Enables Swagelok stainless steel to adopt certain performance characteristics of expensive alloys, like titanium or Hastelloy®
- : SAT12 patented surface hardening process diffuses carbon atoms into crystal structure of the stainless steel to increase surface hardness-without forming chromium-rich carbides
- : It achieves a phenomenal tool steel-like hardness and strength in the ferrule without sacrificing corrosion resistance or material ductility (is non-brittle)



After 60 hours.





Saltwater solution, specimens treated with the SAT12 process showed no damage after one week, whereas untreated specimens showed damage

SWAGELOK, WE CAN PROVE OUR TECHNOLOGY WITH ENGINEERED COMBINATION.





Swagelok "Engineering Combination"

you can use Swagelok Tube Fitting 316 SS with High Alloy Tubing, 904L, Alloy 825, Alloy 254 and Copper Alloy (Tungum) Swagelok, we warrantee for it...



OUR PRODUCTS



Fittings

- : Flange to Tube Fitting
- : Tube Fittings
- : Jacketed Tube Connector
- : Pipe Fitting
- : VCR® and VCO® Fitting
- : Weld Fitting
- : Biopharm Fitting



- : Ball valves
- : Bellows Sealed
- : Check valves
- : Diaphragm valves
- : Needle valves
- : Metering valves
- : Relief valves
- : Manifolds



Measurement Devices

- : Flowmeters & Sensors
- : Gauges
- : Smart Products
- : Temperature Sensor
- : Transducers



Quick-Connects
Regulators
Sample Cylinders
Tubing and Accessories
Hoses
Leak Detectors,
Lubricants & Sealants



Sample Cylinder

Valves



TUBE BENDING SERVICES



Save you time and cost, simplify and add efficiency to your projects. Your team can focus elsewhere and you can utilize floor space at your facility for other purposes.

Tube bends can also be integrated into panels and other assemblies at our Swagelok® Custom Solutions facility. Your fittings can be pre or fully swaged. You will receive ready-to-install parts, with no waste and less busywork for your team.



More space in your own facility



More time for your team to focus on other important projects



Quality-checked, ready to install tubing from a local partner with over 35 years of expertise in fluid systems



ORBITAL WELDING

For projects requiring a consistent and efficient approach to welding, the Swagelok orbital welding system offers precision and control combined with easy-to-use touchscreen operation.

The Swagelok orbital welding system provides repeatable orbital gas tungsten arc welds (GTAW) for both tubing and pipe. Its real-time monitoring and recording capabilities streamline documentation for easy adherence to industry requirements.

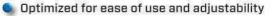


Weld Heads

- Enable reliable, consistent orbital welding of tube and pipe
- Perform welds on outside diameters ranging from 1/16 to 4 in. and 2 mm to 114 mm

Fixtures and Collets









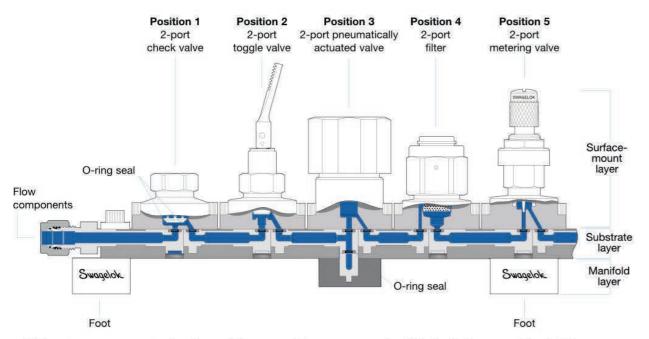
MODULAR PLATFORM COMPONENTS

Modular Platform Components, MPC series assembly provides a compact fluid-distribution system with a reduced footprint for efficient use of component space.

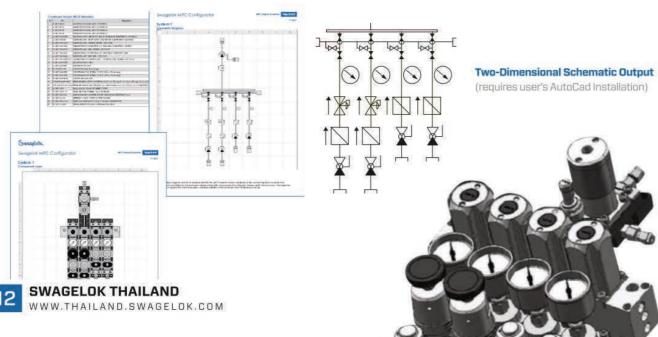
Modular technology allows the user to customize each system for a specific application and reduces installation and maintenance time. Surface-mount components can be serviced easily from the top of the assembly without disturbing any other components.

MODULAR PLATFORM COMPONENTS, MCP

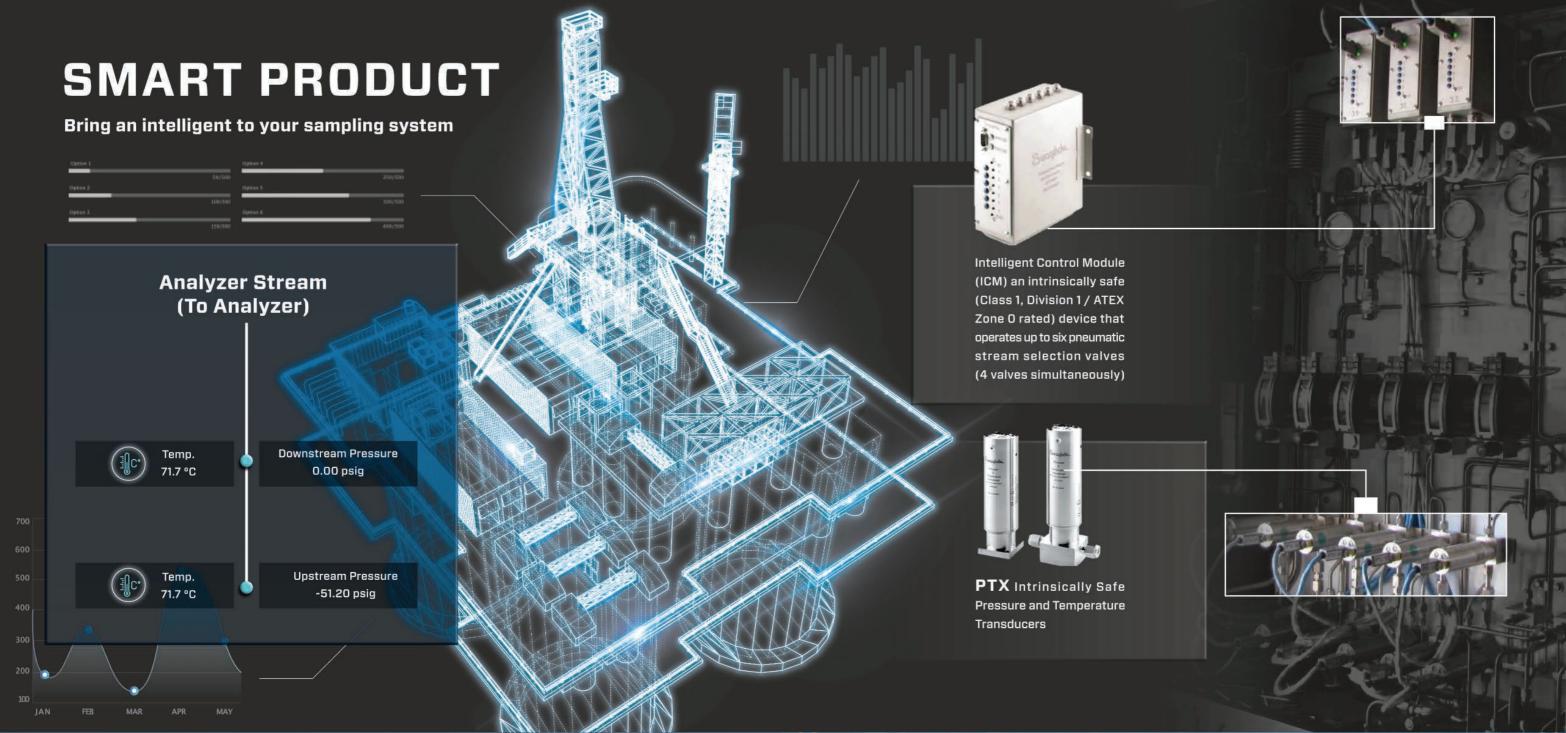
consist of a variety of Swagelok surface-mount components, which are ANSI/ISA 76.00.02-compliant.



MPC system component selection and the assembly process are simplified with the use of the MPC System Configurator, a free Windows*-based software program.







Why send technicians to check on a sampling handling system if it's not causing problems?

Now, you can give your sampling system a brain with Swagelok's intrinsically safe Intelligent Control Module™ (ICM™) and intrinsically safe PTX series pressure and temperature transducers. They're smart products that tell you what's going on with your sampling system.

Smart products capture and report critical flow, temperature, pressure, and valve position on your process samples destined for process analyzers.

Accepts analog and digital inputs from a variety of sensors

- Brings control and logic functionality to the sample system through an embedded script processor
- Communicates with other systems through a CANopen® network interface



PrESS Pre-Engineered Subsystem

Field-tested design ensures optimum system performance.

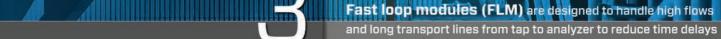
Swagelok now offers a series of pre-designed and pre-assembled subsystems for use in all types of plants and facilities where fluids are being processed.

Use Swagelok pre-engineered subsystems to create fully documented fluid sampling and control systems without the worry of acquiring and assembling multiple parts. Our proven sub-assemblies minimize system footprints, simplify system design, and promote representative samples and accurate analytical results.

- Sample Probe Modules
- Fast Loop Modules
- Field Station Modules
- Calibration and Switching Modules
- Fluid Distribution Headers

as versatile manifolds in a variety of gas and liquid applications, providing a flow path with multiple outlets. The unique body design with solidly mounted components eliminates twisting. Easily connect multiple Fluid Distribution Headers inline to create longer lengths.

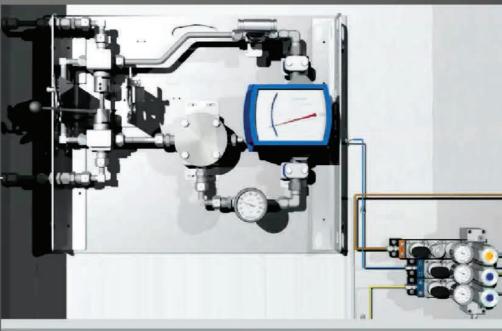
Fluid Distribution Headers (FDH) are used



for online analyzer systems.

transports a pre-conditioned, reducedpressure process gas to an analyzer. Preconditioning a gas sample at the extraction point and transporting the sample at low pressure results in faster analyzer response time, less condensation, and less environmental impact.

Using Sample Probes Module (SPM) in conjunction with sample probe valves can improve safety as well as sample purity and timeliness.



Calibration and Switching Module (CSM) provides a discrete switch between multiple process samples and conditions and selects process streams for analysis.

SWAGELOK®

CUSTOM SOLUTIONS GRAB SAMPLING MODULE (GSM)

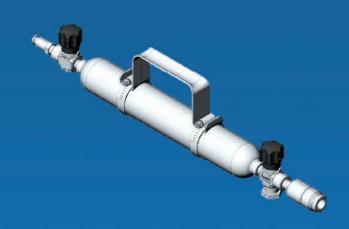
Grab sampling or lab sampling or spot sampling, is the collecting of a sample of liquid or gas in a pipeline, tank, or system with the intent of transporting the sample to a laboratory for analysis.

Part of the value of a Swagelok grab sample solution is a standard design can be easily customized to your specific process requirements.

No need to worry about adjusting your sample because of a system limitation—we get it configured correctly right from the start and offer quick local support if your requirements change down the road.

Various configurations of sample cylinder assemblies are available

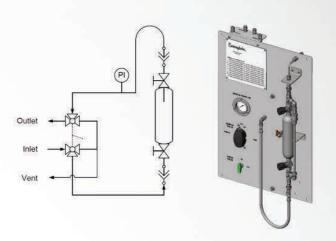
- Five cylinder size (150, 300, 400, 500 and 1000 cm³)
- Multiple cylinder and valve material option
- With or without purge bypass tube
- Choice of quick connects
- Accessories: outage tubes, rupture discs and handle
- PTFE coated Inner wall, SilcoNert® coating or electropolished inner
- DOT and TPED approved





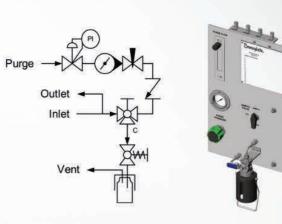
Cylinder Type

For Volatile Liquid & Gas Sample



Bottle Type

For Liquid Sample



Vent



Swagelok Switching Gear Valve

Single-handle switching valve feature allows for simultaneous control of fluid routing when drawing a sample. Available with 2 or 3 valves

SWAGELOK® MECHANICAL SEAL SUPPORT SEAL SUPPORT SYSTEM FOR PUMPS, AGITATORS AND MIXERS SIMPLIFY ASSEMBLY **MAXIMIZE UPTIME** SAVING LABOR COSTS Standardization is key in maximizing uptime and increasing efficiency. All our seal support plans are designed

using API 682-recommended best practices. Combined with Swagelok's fluid systems expertise, each design can be customized to be easy to use, easy to maintain, and safe to operate.

Our mechanical seal support systems are designed to simplify assembly and maintenance, maximizing your uptime while saving on labor costs.



Between Seal Plans

Plans: 52, 53A, 53B, 53C, 54, 55, 72, 74, 75, 76, 72/76



Atmospheric Plans

Plans: 51, 62, 65A, 65B



Process Side Plans

Plans: 11, 12, 13, 14, 21, 22, 23, 31, 32, 41

SWAGELOK SEAL PLAN COMPONENTS,

help keep your rotating equipment running efficiently, with less downtime and fewer leaks. Our 2-inch and under components replace traditional threaded and welded pipe connections with bent tubing, tube fittings, and other quality parts

Improve the Way You Connect:

- Eliminate threaded pipe and potential leak points with a single fitting
- Replace threaded or welded flange assemblies
- Simplify installation



Integral Orifice Flange Adapter:

Replace threaded or welded flange assemblies with a one-piece flange adapter with integral orifice.



Thermowell Tee:

Reduce threaded connections and monitor temperature with integrated thermowell pre-welded into tube fitting tee for ease of installation.



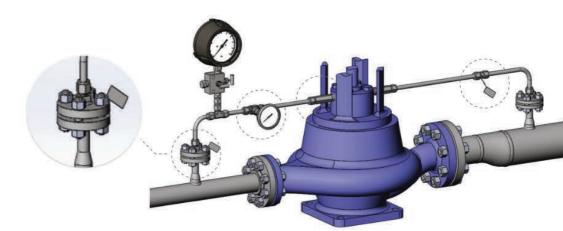
Orifice Union:

Easily add an orifice to a flush system with the orifice union. This fitting makes welding bulky flange assemblies unnecessary. Tagged for visual identification.



Extended Male Connector:

Eliminate threaded pipe and potential leak points with a single fitting. Available in 4-inch and 6-inch lengths to allow you to clear the shroud and go straight from the gland to your tubing run in one piece.



SWAGELOK® CUSTOM SOLUTIONS

WE ASSEMBLY IT FOR YOU...

From project start to completion, sometimes you need to work with a supplier that provides a full range of product and solutions. Swagelok® Custom Solutions refers to our expert capability to supply assemblies and fabrications using Swagelok products and other customer-specified components.

FROM BASIC TO SYSTEM ASSEMBLY, SWAGELOK® CUSTOM SOLUTIONS, WE CAN HELP...

From project start to completion, sometimes you need to work with a supplier that provides a full range of product and solutions. Swagelok® Custom Solutions refers to our expert capability to supply assemblies and fabrications using Swagelok products and other customer-specified components.

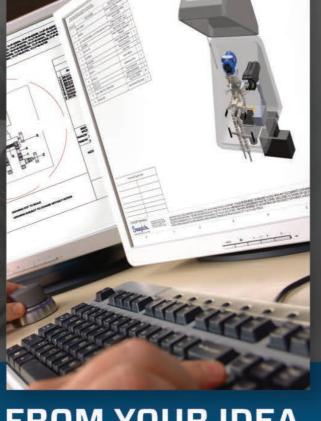
BASIC ASSEMBLY

- Air Manifold
- Valve with actuator
- Special Tube Bending
- Distribution Manifolds
- Hose Assemblies
- Sample Cylinder Assemblies
- Regulator Manifold Assemblies
- Relief Valve Spring Set

SYSTEM ASSEMBLY

- Sample Panel
- Sample Conditioning Subsystem
- Stream Selecting Assemblies
- Chemical Injection Skid
- Skid Assemblies
- Gas Distribution Panel
- Instrument Enclosures
- Grab Sampling System





Provide a CAD drawing and/or 3D of your assembly, a technical quotation and firm pricing.



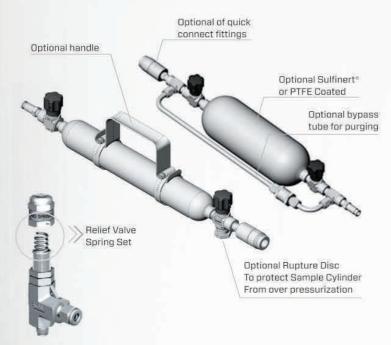
Whether you have a preliminary drawing or a simple idea, it's never to early to consult with our team of experts. We are at your service to create assemblies that meet the unique needs of your application - from initial idea and concept right through to the tested, finished product.



We gather the necessary parts from Swagelok and Non-Swagelok, build the assemblies and manage all inspection, packaging and deliver a complete solutions with limited lifetime warranty.









Regulator Assembly



ONSITE SERVICE

& IMPROVE EFFICIENCY

FLUID SYSTEM EVALUATION AND ADVISORY SERVICE (FSEAS)

- Installation review, highlight incorrect application of products and materials choice,
- Qualification of system integrity, safety and performance
- Priority based maintenance requirement

HOSE ADVISORY SERVICE (HAS)

- Providing feedback on hoses, installation, inspection and maintenance
- Providing hose selection criteria
- Suggesting standardized end connections and
- Prioritized improvement and suggested replacement

ENERGY ADVISORY SERVICE (ESP)

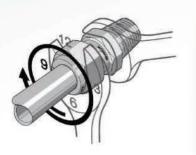
- Determine leakage location and identify area of improvement to reduce energy cost and emission
- Tag all leak and report estimating cost of the lost energy and profits

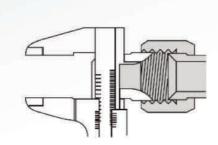
SITE SUPERVISION

- Ensure your fluid system install safety onsite activities adhere to Swagelok Installation procedure
- Support for an installer training program and optimize installation best practices during hook up and tie-in, followed by a post build system assessment
- Qualification of system integrity, safety and performance

Record all evident on **Onsite Inspection** Service (OIS) app









TUBE FITTING INSTALLATION TRAINING (1 DAY)

THREAD IDENTIFICATION TRAINING (0.5 DAY)

TUBE BENDING TRAINING (0.5 DAY)

1+2+3 | 2 Day

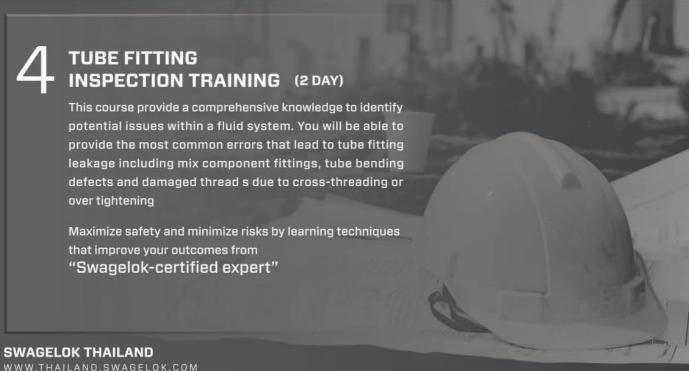
Comprehensive Training Class

Once you have successfully completed your exam, you will receive a certificate and Swagelok registration with a validity of 3 years



SWAGELOK CERTIFIED TRAINING

Build and even better workforce today with Swagelok Certified Training Our training programs cover many areas, from trends and technology to installation and safety





EVALUTION & ADVISORY SERVICE

Partnering with our field engineering team for on-site evaluation and advisory service, working alongside in customer facilities to understand process and environmental conditions, diagnose problems, recommend solutions and more. This direct assistance leads to more efficient and safer systems.

Sample System (Ai Survey)

Improve sample system reliability with our expert, in-depth analysis of every component and subsystem, from tap to analyzer. Increase productivity, reduce operating expenses and maintenance costs, and identify unseen opportunities for overall system improvement by:

- Reducing time delay
- Improving compatibility with your analyzer
- Obtaining more representative samples

Grab Sample System

Improve your grab sample systems with safer, more accurate, and compliant samples. Our team of trained advisors can identify issues affecting sample quality and opportunities for enhancing system performance by:

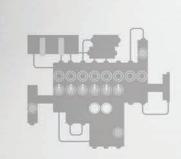
- Eliminating causes of poor sample quality
- Reducing required maintenance and analyzer downtime by optimizing system design











SWAGELOK ANALYTICAL INSTRUMENTATION TRAINING

PROCESS ANALYZER SAMPLING SYSTEMS (PASS)

Class duration: 5 days

Improve process accuracy and optimize analyzer performance by:

- Recognizing and diagnosing sample transport problems
- Calculating pressure drop in a fast loop or return line
- Preventing or controlling phase separation
- Reading and creating sample system schematics
- Designing and building your own sample system

This class is appropriate for: Engineers, Chemists, Technicians, or those involved in the design, building, operation, or maintenance of process analyzer sample systems

SAMPLE SYSTEM PROBLEM SOLVING **AND MAINTENANCE (SSM)**

Class duration: 2 days

Improve sample system performance by:

- Calculating and optimizing sample transport lag (time delay) for liquids
- Selecting and maintaining sample system hardware
- Troubleshooting and improving existing sample system designs

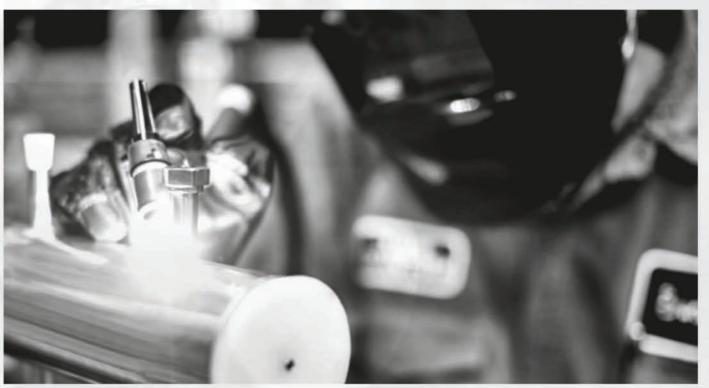
This class is appropriate for Analyzer Technicians, Maintenance Personnel, and those new to sample systems

ORBITAL WELDING

Class duration: 4 days (optional 5th for ASME section IX qualification testing)

Orbital Welding Training is a class that teaches attendee a basic welding principles and the fundamentals of orbital welding. Attendees will learn to set up, operate, troubleshoot equipment, and critique weld quality. The class features Swagelok M200 power supply and weld heads. Attendee has an option to stay for the fifth day and create welds that will be submitted for ASME Section IX qualification.

SWAGELOK ORBITAL WELDING



WHAT YOU'LL LEARN

Understanding basic metallurgy and industry standards also specifications for welding

- Learning how to set up, run, and troubleshoot a Swagelok orbital welding system
- Making consistent, quality welds for seamless tubing installation

This class is appropriate for: Welders, Welding Supervisors, Quality Assurance and Control Personnel



SWAGELOK ENERGY ADVISORS

YOUR TRUSTED RESOURCE FOR OPTIMIZING STEAM SYSTEM PERFORMANCE

SWAGELOK ENERGY ADVISORS, INC. (SEA),

Swagelok Energy Advisors, Inc. (SEA), wholly owned by Swagelok Company, helps clients around the world strengthen performance and efficiency by providing high-impact consulting and training services for steam, condensate and compressed air systems.

THE VALUE WE PROVIDE

Our proven project management and roadmap implementation services help clients attain their operational goals in the areas of efficiency, reliability and risk reduction.

We can provide value in many ways:

- √ System optimization
- ✓ Reduced energy costs savings of 10 percent or more
- √ Reduced emissions of CO2, NOx and SO2
- √ Less production downtime
- ✓ Production improvements
- ✓ Improved worker health and safety code compliance, water hammer issues
- ✓ Real cost savings thousands of dollars saved even from correcting one 1/8- or 3/8-inch leak

Our highly experienced steam system engineering consultants and senior field engineers have been involved in thousands of steam system projects around the world. Our global team, supported by a network of more than 200 authorized Swagelok sales and service centers, delivers immediate and ongoing impact with:

- Steam and Condensate System Training
- Steam System Evaluation
- Steam System Roadmap Implementation
- Steam Trap Station Management Program
- Ultrasonic Leak Detection for Compressed Air Systems

