Swagelok® Field Services

HELPING TO RELIEVE YOUR PRESSURES

Let Swagelok's world-class product and systems **Training** and **Evaluation and Advisory Services** strengthen your workforce, with hands-on instruction and on-site support designed to meet your toughest challenges.

Training

STRONG TODAY. STRONGER TOMORROW.

Build an even better workforce with expert-led, Swagelok-certified training at your site. Designed to help you maximize today—and strengthen tomorrow.

ANALYTICAL INSTRUMENTATION
MATERIALS SCIENCE
SWAGELOK ESSENTIALS
ORBITAL WELDING
ADVANCED TUBE BENDING

LEARN HOW OUR TRAINING MAKES OUR WORKFORCE STRONGER

"Top performing companies not only recognize the importance of their people but also the need to provide the right skills to enable their people."[1]

—IBM Corporation, *The Value of Training, 2014*

Training

ANALYTICAL INSTRUMENTATION

Better sample system design means more representative samples. Learn to recognize and eliminate the issues that might be compromising your sample and analyzer systems with our expert-led classes.

PROCESS ANALYZER SAMPLING SYSTEMS (PASS)

PASS - SUBSYSTEMS

SAMPLE SYSTEM PROBLEM SOLVING & MAINTENANCE

LEARN MORE

Training: Analytical Instrumentation

PROCESS ANALYZER SAMPLING SYSTEMS (PASS)

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

Class duration: 5 days

LEARN MORE

Training: Analytical Instrumentation

PASS - SUBSYSTEMS

Improve analyzer system reliability by:

- Differentiating among the functions that a sample system performs
- Using each function within the sample system to achieve best performance
- Creating reliable sample systems
- Analyzing a complex system to understand it better
- Troubleshooting problem designs in the field or on the drawing board

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

Class duration: 5 days

LEARN MORE

Training: Analytical Instrumentation

SAMPLE SYSTEM PROBLEM SOLVING AND MAINTENANCE

Improve sample system performance by:

- Calculating and optimizing sample transport lag (time delay) for liquids and gases
- 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

Class duration: 2 days

LEARN MORE

Training

MATERIALS SCIENCE

Learn more about materials—from micro-structural characteristics to mechanical properties. Then put this knowledge to work as you select materials for your application. Our experts meet you right where you are—and help you go beyond your expectations.

Optimize fluid systems by:

- Learning critical properties, such as corrosion resistance, of materials and their suitability for your application
- Identifying design errors
- Creating long-term system improvements to enhance sample reliability

This class is appropriate for: Engineers, Managers, Supervisors, Buyers or Purchasing Agents, and anyone involved in the material selection process

Class duration: 1 day

LEARN MORE

Training

SWAGELOK ESSENTIALS

Maximize safety and minimize risks by learning techniques that improve your outcomes directly from Swagelok-certified experts at a location near you.

TUBE FITTING INSTALLATION
TUBE FITTING INSTALLATION INSPECTION
VALVE
TUBE BENDING
HOSE
MEDIUM/HIGH PRESSURE CONE & THREAD
REGULATOR

LEARN MORE

"[Most] employees in best-performing organizations get the training they need to maintain that performance."[2]

—IBM Smarter Workforce Survey, 2013

Training: Swagelok Essentials

TUBE FITTING INSTALLATION

Decrease costs, increase employee safety and equipment uptime, and minimize leaks with correct tube fitting selection, preparation, and installation.

Attendees will learn the proper way to cut and deburr tubing, install, disassemble and reassemble a Swagelok tube fitting, and identify basic thread types.

This class is appropriate for: Installers, Technicians, Contractors, Fabricators, Engineers, Managers

Class duration: class length varies, depending on customer requirements

LEARN MORE

"Businesses spend $170 billion a year on costs associated with occupational injuries and illnesses—expenditures that come straight out of company profits."[3]

—Occupational Safety and Health Administration

Training: Swagelok Essentials

TUBE FITTING INSTALLATION INSPECTION

Ensure components within your system have been correctly installed, and are performing optimally. You will learn to:

- Inspect your fluid system installation
- Identify correct Swagelok tube fitting and fluid system component installation and placement
- Identify correct tubing types, placement, and support
- Inspect tubing for proper, defect-free bends

This class is appropriate for: Inspectors, Installers, Technicians, Contractors, Engineers, Managers, Quality Assurance Personnel

Class duration: 4 hours

LEARN MORE

Training: Swagelok Essentials

VALVE

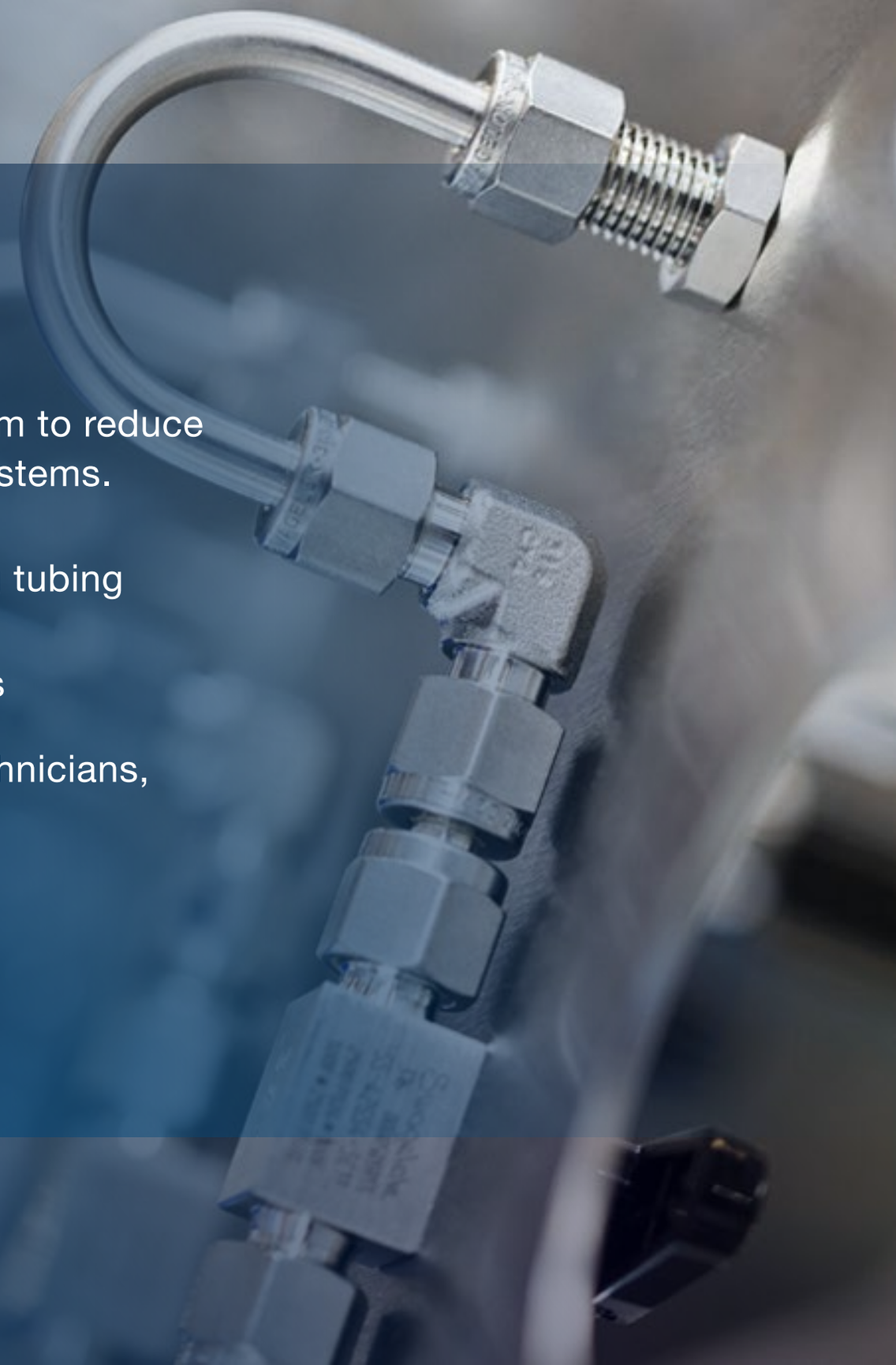
Select, troubleshoot, and maintain the valves that are critical to your operation.

- Become familiar with fluid system concepts
- Learn the differences in valve types and functions
- Identify and resolve common fluid system issues

This class is appropriate for: Engineers, Installers, Technicians, Contractors, Fabricators, Managers

Class duration: Class length varies, depending on customer requirements

LEARN MORE



Training: Swagelok Essentials

TUBE BENDING

Minimize leaks by introducing bent tubing to your system to reduce connections and leak points found in traditional pipe systems.
Learn how to:

- Reduce connection points and leak potential by using tubing in your installations
- Customize tubing through correct bending techniques

This class is appropriate for: Fabricators, Installers, Technicians, Contractors, Engineers, Managers

Class duration: 4 hours

LEARN MORE

Training: Swagelok Essentials

HOSE

Choose the best hose for your application and extend hose life by understanding fundamentals of:

- Hose construction and selection
- Installation
- Inspection and maintenance

This class is appropriate for: Fabricators, Installers, Technicians, Contractors, Engineers, Managers

Class duration: 4 hours

LEARN MORE

Training: Swagelok Essentials

MEDIUM/HIGH PRESSURE CONE AND THREAD

Improve system safety and maximize your material investment by learning to assemble cone and thread fittings correctly the first time.

- Prepare tube ends for cone and thread assembly
- Troubleshoot common system problems by identifying incorrect installations

This class is appropriate for: Installers, Technicians, Contractors, Supervisors, and those who select and install cone and thread fittings

Class duration: 4 hours

LEARN MORE

Training: Swagelok Essentials

REGULATOR

Learn how the right regulator for your application can increase safety while improving efficiency. With Swagelok Regulator Essentials training, you will become familiar with regulator components and performance characteristics, as well as how to identify and resolve common issues.

- Identify regulator types and suitability for inclusion in fluid systems
- Describe common installation errors, operation techniques, and maintenance suggestions to troubleshoot regulator issues

This class is appropriate for: Engineers, Installers, Technicians, Contractors, Fabricators, Managers

Class duration: 4 to 8 hours, depending on customer requirements.

LEARN MORE

Training

ORBITAL WELDING

Improve fluid system quality and safety by:

- Understanding basic metallurgy and industry standards and 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

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

LEARN MORE

Training

ADVANCED TUBE BENDING

Optimize your tube installation by learning:

- The measure-bend method of tube bending
- The Swagelok method of tube bending
- How to make both simple and complex offset bends by using Swagelok hand and bench-top tube benders

This class is appropriate for: Fabricators, Installers, Technicians, Contractors, Engineers, Managers

Class duration: 2-4 days

LEARN MORE

Evaluation and Advisory Services

WORLD-CLASS. UNBIASED. UN-PARALLELED.

Sometimes you don't know what you need—until you need it. Swagelok Evaluation and Advisory Services can help you strengthen your processes and position you for success. We'll take a deeper look at your systems, and provide you with knowledge and advice to get you where you need to be.

Swagelok Evaluation and Advisory Services help you do more. Call in the fluid system experts to recommend solutions tailored to your toughest challenges.

SAMPLE SYSTEMS | GRAB SAMPLE | HOSE | COMPRESSED GAS LEAK DETECTION

LEARN MORE

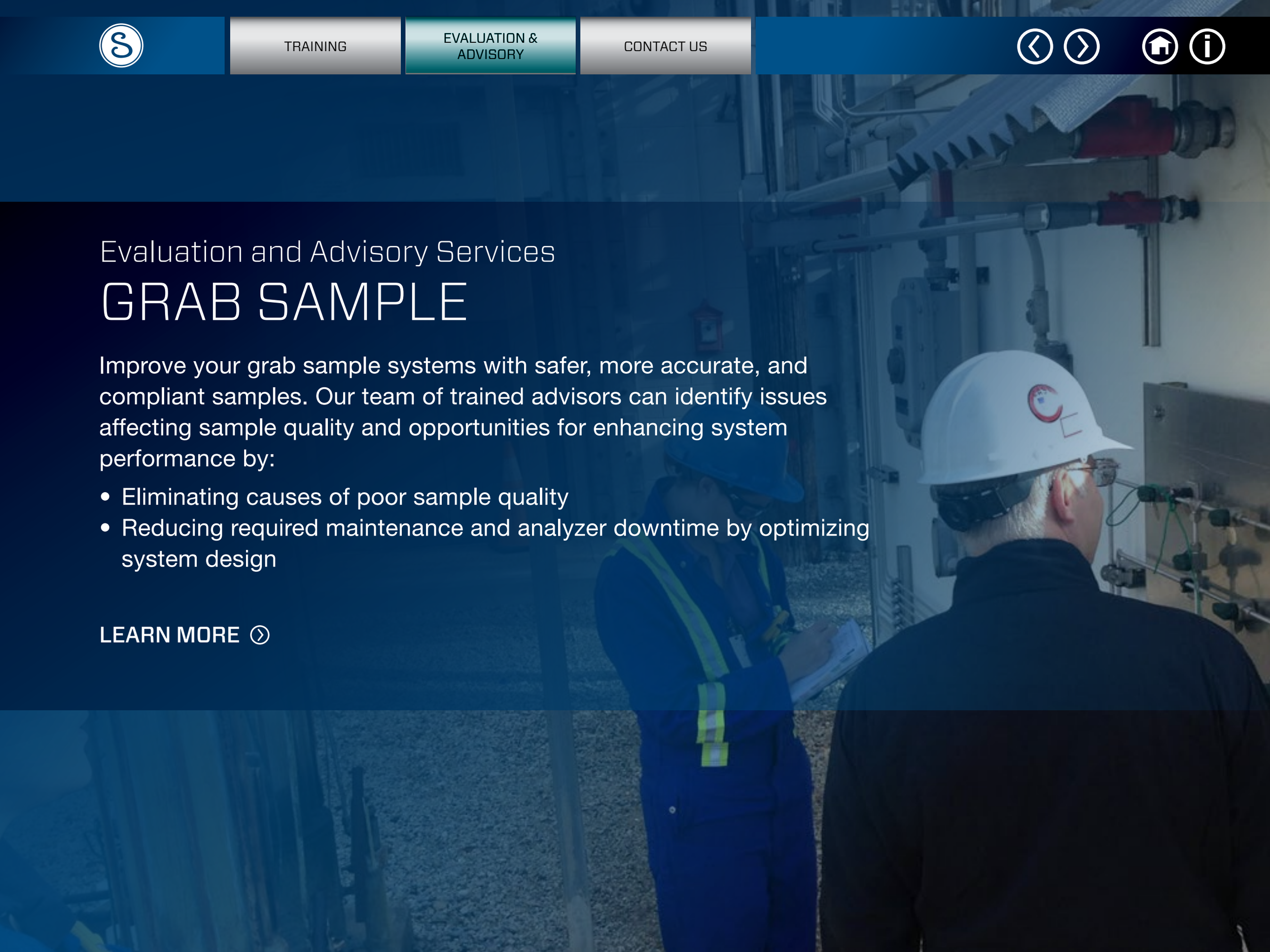
Evaluation and Advisory Services

SAMPLE SYSTEMS

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

LEARN MORE



Evaluation and Advisory Services

GRAB SAMPLE

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

LEARN MORE

Evaluation and Advisory Services

HOSE

Optimize your hose investment by eliminating hose-related issues costing your plant money from unplanned downtime or wasted product. We help you by:

- Providing feedback on hoses, installation, inspection and maintenance
- Providing hose selection criteria
- Suggesting standardized end connections and couplings
- Developing preventative maintenance schedules and identifying components to inventory

LEARN MORE

Evaluation and Advisory Services

COMPRESSED GAS LEAK DETECTION

Improve efficiency in everyday plant operations by:

- Increasing reliability, reducing energy consumption, and reducing emissions due to component failures, installation errors, and incorrect product selection
- Reducing energy loss in everyday plant operations
- Reducing operating costs associated with gas leaks

LEARN MORE

CONTACT US

See what we can do for you today, for an even stronger tomorrow, with more than 200 **sales and service centers** in more than 70 countries on six continents.

FOR QUESTIONS OR SUPPORT, EMAIL: FIELDSERVICES@SWAGELOK.COM

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Contact Us

1 IBM Corporation, "The Value of Training," *https://www-304.ibm.com/services/learning/pdfs/IBMTraining-TheValueofTraining.pdf*. IBM Corporation Software Group, May 2014.

2 IBM Corporation, "IBM Smarter Workforce Survey, 2013," cited in "The Value of Training," *https://www-304.ibm.com/services/learning/pdfs/IBMTraining-TheValueofTraining.pdf*. IBM Corporation Software Group, May 2014.

3 Occupational Safety and Health Administration, "Safety and Health Add Value," *https://www.osha.gov/Publications/safety-health-addvalue.html*. Occupational Safety and Health Administration, undated.

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