Sampling System Problem Solving and Maintenance Training (SSM)

designed for sampling system technicians and maintenance personnel

Troubleshoot Your Sampling System in Two Days

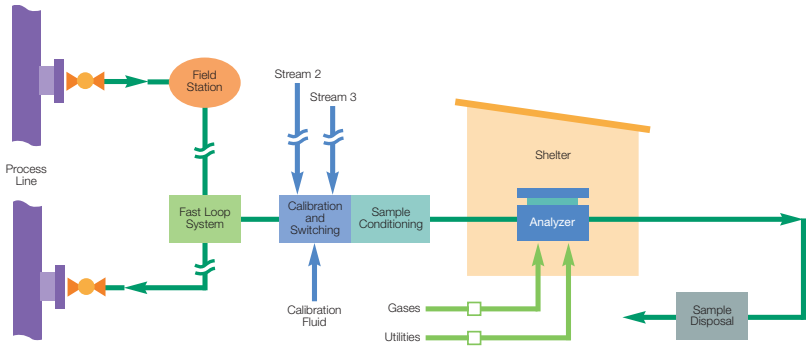
If your job is maintaining a sampling system, you may not have the time or resources to come up to speed on the system. Achieving the results you need depends on deepening your understanding of the system, as well as fine-tuning the system for optimum performance.

You can eliminate mistakes in your sampling system. And you don't have to do it alone. Swagelok Training Maintenance Training (SSM) teaches fundamental and advanced practices in analytical instrumentation operation and maintenance, empowering you to maintain your sampling system with minimal error and greater system integrity.

Course Objectives

Here are a few examples of what you will learn:

- Sample system performance
- Diagnosing and fixing time delay problems
- Sample conditioning techniques



This two-day training course covers aspects of a sample system, from process line and tap through transport lines, steam switching, sample conditioning, analyzer and disposal.

Sharpen Skills. Meet Demanding Requirements. Enroll Today.

Swagelok Southern California is offering Sampling System Problem Solving and Maintenance Training (SSM) in the greater Los Angeles area on **Wednesday-Thursday, October 4th & 5th, 2023**. Class sizes are limited to 15 attendees to keep the learning atmosphere comfortable and effective. To reserve your seat or receive more information on tuition or additional course details, please contact your account manager at (800) 252-7087 or email Jen Burrell at jen.burrell@swagelok.com.

Swagelok

What will you learn?

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COURSE OBJECTIVES

Day 1

Fundamentals: Classwork and Basic Exercises

Performance of Sample Systems

- Maintenance techniques
- Sample compatibility with analyzer
- Time delay in sampling
- Mixing and contamination

Diagnosing and Fixing Time Delay Problems

- Sample transport time calculations for liquids and gases
- Gas compressibility and time delay

System Components

- Flow valve basics and the effects of water hammer
- Pressure measurement devices
- In-depth look at pressure regulators and common problems
- Pumps and temperature regulation

Day 2

Sample Conditioning Techniques

- Proper use of filters and coalescers
- Understanding and controlling phase change
- Liquid, vapor, and gas separation devices
- Design of field stations and fast loops
- Troubleshooting sample systems
- Group projects

About the Instructor

Ethan Liebswager

Swagelok Field Engineer

Ethan Liebswager began his career in sales at Swagelok 10 years ago with Eastern North Dakota and Western Minnesota, and moved into an Application Engineering role within their Custom Solutions team in 2016. He became a certified Swagelok Field Engineer in 2020. Field Engineers are trained technical liaisons and advocates between the customer, our distributor network, and Swagelok engineering resources. Their primary focus is to provide technical expertise through a sound understanding of our customers' applications

Ethan has a degree in Agricultural and Biosystems Engineering. With Swagelok, he has gained specific industry experience in Chemical & Petrochemical, Medical, Oil & Gas, Power, Pulp & Paper, and R&D. He has completed the certification required to offer both instructional and working expertise in the following areas:

- Process Analyzer Sample System Training
- Sample System Problem Solving and MaintenanceTraining
- Gas Distribution Systems including Pressure Regulator Sizing
- Mechanical Seal Support System
- Grab SamplingSystems
- Hose Selection and Installation

Here's what graduates of this course have to say:

"The broad scope of material covered helped me tie in may new concepts. I learned A LOT!"

"Good for helping me understand how the theoretical relates to real-life applications."

"The class lectures were helpful. Using real life experiences and situations made it very interesting."