



# Sampling System Training

## Improve process accuracy & optimize analyzer performance

### Sampling System Problem Solving and Maintenance Training - SSM - 2 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 prepares analytical instrumentation technicians and maintenance personnel to catch mistakes before they happen and recognize existing problems in installed sampling systems.

Our Sampling System Problem Solving and 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.

### For who?

Maintenance and Reliability personnel, Analytical System Engineers new to use of sampling systems.

### Topics

- gain a better understanding of sample system components, such as valves and regulators
- diagnose and troubleshoot sample system errors
- learn sample system maintenance techniques
- diagnose and fix time delay problems
- understand sample system performance
- learn why and how samples change phase and how to manage your systems to control it
- though hands-on exercises and team projects using fluid system components such as regulators
- apply course knowledge to solve real life problems



Bert Laan during the SSM class talking about sample system performance



## Sharpen your Skills and Meet Demanding Requirements in just two days

### 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 & 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

Group Projects

- 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

## Bert Laan

Industry Expert and  
Consultant

In his 30 years experience in industry, Bert has provided expert insight and analysis for a variety of applications.



With extensive experience in research, development, and project management, Bert has supported many industries, including an oil treatment gas recovery project and designed several analyzer systems.

He earned a Chemistry and electronics degree at the University of Kent.

### Course dates

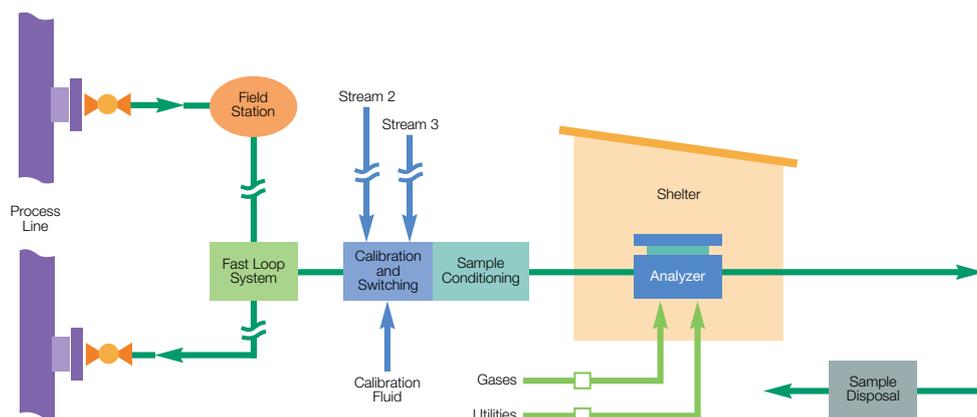
On request

### Location

Live training at Swagelok Nederland office in Waddinxveen

### More information

Check our website, contact us directly, click on button or QR code to register today.



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