

**Rosemount Analytical 951C Chemiluminescence Gas Analyzers**

**Course 2102**

**Overview**

This 1-day course uses lectures and hands-on service training to instruct the student on how to install and maintain the Rosemount Analytical Model 951C Chemiluminescence Analyzer. Students will:

- identify subassemblies and explain their functionality
- explain the principles of operation
- calibrate and test
- properly install and troubleshoot

**Topics**

- 951C Overview and Principles of Operation
- Test Equipment Selection
- Bench Testing the 951C
- Calibrating the 951C Chemiluminescence Analyzer
- Installation and Start-Up
- Troubleshooting and Maintenance

Available on Request in Houston, TX, Solon, OH, or at Customer Site

**Rosemount Analytical Continuous Emissions Monitoring Systems (CEMS)**

**Course 2157**

This course is for instrument technicians responsible for the maintenance of continuous emissions monitoring systems.

**Overview**

This 3-day course covers basic fundamentals and the theory of operation, installation, calibration and maintenance of continuous emissions monitoring systems.

**Topics**

- Environmental Requirement
- Process Applications
- Theory of Operation
- Sample System Instrument
  - Installation and Troubleshooting
  - Hardware and Maintenance

Available on Request in Houston, TX, Solon, OH, or at Customer Site

**Rosemount Analytical NGA 2000 Process Gas Analyzers**

**Course 2107**

**Overview** This 5-day course consists of 1-day per selected analyzer:

- NGA Platform
- NGA CLD
- NGA WCLD
- NGA FID
- NGA HFID

Lectures and hands-on service training are provided on how to install, maintain, and troubleshoot the NGA series of analyzers. Students who complete this course will:

- identify individual modules and their functionality
- understand the basic theory of operation of each module
- set up software variables for proper calibration and operation
- understand and properly use software diagnostics

**Topics**

- NGA Overview
- NGA as a System
- NGA Testing
- NGA Start-Up and Installation

Available on Request in Houston, TX, Solon, OH, or at Customer Site

**Rosemount Analytical 400A Hydrocarbon Gas Analyzers**

**Course 2103**

**Overview** This 1-day course uses lectures and hands-on service training to instruct the student how to install and maintain the Rosemount Analytical Model 400A Hydrocarbon Analyzer. Students will:

- identify subassemblies/explain functionality
- explain the principles of operation
- calibrate and test
- properly install and troubleshoot

**Topics**

- 400A Overview and Principles of Operation
- Test Equipment Selection
- Bench Testing the 400A
- Calibrating the 400A Hydrocarbon Analyzer
- Installation and Start-Up
- Troubleshooting and Maintenance

Available on Request in Houston, TX, Solon, OH, or at Customer Site

**Rosemount Analytical MLT Process Gas Analyzers**

**Course 2110**

**Overview**

This 3-day course uses lectures and hands-on service training to provide instruction on MLT analyzers, platforms, and other menu structures. The course will teach the student on how to install, maintain, and troubleshoot the MLT series of analyzers. Application and selection will be briefly covered including the hazardous area requirements. Students will:

- identify modules and their functionality
- understand the basic theory of operation
- set up software variables for proper calibration and operation
- use the software diagnostics to troubleshoot problems

**Topics**

- Overview of MLT
- Theory of Operation
- Installation
- Configuration and Calibration
- Maintenance and Troubleshooting

**Location**  
Solon, OH

For Rosemount Analytical training info please refer to the appropriate contact on page 118. For regional training center contacts refer to pages 116-117. Visit: [www.emersonprocess.com/education](http://www.emersonprocess.com/education) for current dates, locations and enrollments.

## Rosemount Analytical Oxymitter and World Class 3000 Oxygen Flue Gas Analyzer - Maintenance

### Course 2153

#### Overview

This 1-day course covers the service requirements for oxygen analyzers in general and the installation, operation, calibration and maintenance of the World Class and Oxymitter.

#### Topics

- Combustion Requirements
- Methods of Oxygen Analysis
- Typical Uses of Oxygen Analysis
- Combustion Efficiency
- Zirconia ( $ZrO_2$ ) Oxygen Analysis
- Theory of Operation
- Oxygen Analyzer: Installation; Hardware; Maintenance; Troubleshooting; Hart Communications

Offered on Request at Customer Site

## Rosemount Analytical X-Stream Process Gas Analyzers (PGA)

### Course 2170

#### Overview

This 3-day course uses lectures and hands-on training to teach the student the non-dispersive infrared, electrochemical, or paramagnetic oxygen and thermal conductivity measurement techniques used in the analyzer. Applications will be reviewed including the various housings to meet the environmental needs. The student will:

- learn the theory of operation
- set up software variables for proper calibration and installation
- understand and use the troubleshooting tools including diagnostics

#### Topics

- Overview and Theory
- Application and Selection of Options
- Installation and Troubleshooting
- Maintenance and Calibration

Available on Request in Solon, OH, or at Customer Site

## Gas Analysis: Safety Training for On-Line Process Gas Analyzers

### Course 2171

#### Overview

This fully customized 5-day course provides students with a strong understanding of gas analyzer best practices as they relate to the safe operation and maintenance of the specific model(s) of Rosemount Analytical gas analyzers found in their plants, including the NGA2000, MLT, Binol, CLD, X-STREAM, and X-STREAM XE. The instructor focuses on the specific analyzers that are applicable to the students' specific needs. This course emphasizes safe handling of Rosemount Analytical analyzers. All necessary equipment and important handouts will be provided.

#### Topics

- Analyzer Overview, Including Hardware and Construction
- Software Functionality
- Physical Principles of IR and UV Photometric Measurements and Oxygen Paramagnetic Measurements
- Overview of the Electronics
- Replacement of Physical Components
- Testing and Troubleshooting
- Spare Parts
- Mechanical Assembly/Disassembly
- Sample Handling System – Method, Theory, and Troubleshooting
- Site-specific Applications
- Theory of Operation
- Installation and Start Up
- Troubleshooting and Maintenance
- Audit and Reporting Requirements

Available on Request in Houston, TX, Solon, OH, or at Customer Site