Rosemount Analytical 500 and 700 Gas Chromatographs (GC) - Introduction

Course R4100 CEUs: 2.1

Overview This 3-day course provides students with a basic understanding of how a gas chromatograph works, emphasizing chromatograph fundamentals and basic theory.

Topics

- Reviewing Basic Chromatography Principles
- Understanding Chemistry, Flow Configuration, and Gas Systems
- Understanding Basic Sample Systems
- Working with Chromatograph Hardware
- Setting Timed Events, Retention Times, and Response Factors
- Understanding Data Calculations
- Identifying Problems Using Chromatograms

Available On Request at Houston Texas or Dumyat Scotland [UK] or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Wednesday to accommodate travel.

Rosemount Analytical 500 Gas Chromatograph - Operation and Maintenance

Course R4210 CEUs: 3.5

Overview This 5-day course is appropriate for those who have either worked with a chromatograph for at least six months or completed the 'Introduction to Gas Chromatographs' course. It prepares participants to operate and repair a Model 500 gas chromatograph.

Prerequisites 'Introduction to Gas Chromatographs' course or equivalent knowledge.

Topics

- Understanding Gas Chromatography and a Gas Chromatograph
- Using the Basic Chromatograph System in Process Gas Analysis
- Understanding Carrier and Calibration Gas Systems
- Installing and Operating MON Software
- Applying Chromatograph Integration Techniques and Post-Analysis Calculations
- Using the Chromatograph to Identify Problems
- Setting Timed Events, Retention Times, and Response Factors
- Starting Up a Gas Chromatograph
- Understanding Sample Handling Systems
- Verifying Proper Operation - Gas Chromatograph
- Troubleshooting the 2350A Controller
- Configuring the 2350A Controller User Directory Outputs
- Conducting Preventative Maintenance
- Communicating to Other Devices
- Reviewing Spare Parts Recommendations

Available On Request at Houston Texas or Dumyat Scotland [UK] or On-Site.

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

Rosemount Analytical 700XA and 1500XA Gas Chromatographs (GC) - Introduction

Course R4105 CEUs: 2.1

Overview

This 3-day course gives students a basic understanding of how a 700XA and 1500XA gas chromatograph works, emphasizing chromatograph fundamentals and basic theory.

Topics

- Reviewing Chromatography Principles
- Understanding Chemistry, Flow Configuration, and Gas Systems
- Reviewing Sample Systems
- Working with Chromatograph Hardware
- Setting Timed Events, Retention Times, and Response Factors
- Understanding Data Calculations
- Reading Chromatograms
- Calibrating a Gas Chromatograph

Available On Request in Houston, TX or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Wednesday to accommodate travel.

Rosemount Analytical 370XA Gas Chromatograph - Operation and Maintenance

Course R4170 CEUs: 2.1

Overview

This 3-day training is a level 1 course, includes theory, operations and maintenance practices. Module overview, hardware and software overview as well as basic troubleshooting skills.

Topics

- Chromatographic Theory
- Detector Theory
- Understanding Chromatograms
- Startup Procedures
- Natural Gas Sample Handling
- Using 370XA Software Assistants
- Cal Saver™
- Running Auto Valve Timing
- Module Initializations
- Calibrations, Validation & Routine Maintenance (Valve Rebuilding)
- Troubleshooting the Module.
- 370XA Hardware
- MON 2020 Software
- Module Rebuild Workshop

Rosemount Analytical 700 Gas Chromatograph - Operation and Maintenance

Course R4212 CEUs: 3.5

Overview

This 5-day course is appropriate for those who have either worked with a chromatograph for at least six months or completed the 'Introduction to Gas Chromatographs' course. It prepares participants to operate and repair a Model 700 gas chromatograph.

Prerequisites

'Introduction to Gas Chromatographs' course or equivalent knowledge.

Topics

- Understanding Gas Chromatography and a Gas Chromatograph
- Using the Basic Chromatograph System in Process Gas Analysis
- Understanding Carrier and Calibration Gas Systems
- Installing and Operating MON Software
- Applying Chromatograph Integration Techniques and Post-Analysis Calculations
- Using the Chromatograph to Identify Problems
- Setting Timed Events, Retention Times, and Response Factors
- Starting Up a Gas Chromatograph
- Understanding Sample Handling Systems
- Verifying Proper Operation of the Gas Chromatograph
- Conducting Preventative Maintenance
- Communicating to Other Devices
- Reviewing Spare Parts Recommendations

Available On Request at Houston Texas or Dumyat Scotland [UK] or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

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 for current dates, locations and enrollments.

Rosemount Analytical 700XA Gas Chromatograph - Operation and Maintenance

Course R4213 CEUs: 3.5

Overview

This 5-day course is appropriate for those who have either worked with a chromatograph for at least six months or completed the 'Introduction to Gas Chromatographs' course. It prepares participants to operate and repair a 700XA gas chromatograph.

Prerequisites

'Introduction to Gas Chromatographs' course or equivalent knowledge.

Topics

- Understanding Gas Chromatography and a Gas Chromatograph
- Using the Basic Chromatograph System in Process Gas Analysis
- Understanding Carrier and Calibration Gas Systems
- Installing and Operating MON Software
- Applying Chromatograph Integration Techniques and Post-Analysis Calculations
- Using the Chromatograph to Identify Problems
- Setting Timed Events, Retention Times, and Response Factors
- Starting Up a Gas Chromatograph
- Understanding Sample Handling Systems
- Verifying Proper Operation of the Gas Chromatograph
- Conducting Preventative Maintenance
- Communicating to Other Devices
- Reviewing Spare Parts Recommendations

Available On Request at Houston Texas or Dumyat Scotland [UK] or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

Rosemount Analytical 1500XA Gas Chromatograph - Operation and Maintenance

Course R4214 CEUs: 3.5

Overview

This 5-day course is appropriate for those who have either worked with a chromatograph for at least six months or completed the 'Introduction to Gas Chromatographs' course. It prepares participants to operate and repair a 1500XA gas chromatograph.

Prerequisites

'Introduction to Gas Chromatographs' course or equivalent knowledge.

Topics

- Understanding Gas Chromatography and a Gas Chromatograph
- Using the Basic Chromatograph System in Process Gas Analysis
- Understanding Carrier and Calibration Gas Systems
- Installing and Operating MON Software
- Applying Chromatograph Integration Techniques and Post-Analysis Calculations
- Using the Chromatograph to Identify Problems
- Setting Timed Events, Retention Times, and Response Factors
- Starting Up a Gas Chromatograph
- Understanding Sample Handling Systems
- Verifying Proper Operation of the Gas Chromatograph
- Conducting Preventative Maintenance
- Communicating to Other Devices
- Reviewing Spare Parts Recommendations

Available On Request in Houston, TX or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

Rosemount Analytical Gas Chromatographs (GC) - Operation and Maintenance of the Flame Photometric Detector Module

Course R4215 CEUs: 3.5

Overview

The 5-day course covers the theoretical and practical aspects of the flame Photometric Module [FPD] used with the model 500, 700 and 700XA. It does not cover any aspect of the theory of the model 500, 700 or 700XA neither does it cover the menus and use of MON2000/ MON2020. The course concentrates on practical work. The course is aimed at those who will be carrying out maintenance on the FPD module.

Prerequisites

Persons attending this course must have completed either a model 500, model 700 or model 700XA Operations and Maintenance training course.

Topics

- Sulphur
- FPD Theory and Maintenance
- Applications
- Dismantling and Rebuilding a Flame Cell Replacing all the "O" Rings
- Removing/Installing the Flame Cell and Photomultiplier into the FPD Module
- Setting Up the Hydrogen/Air Ratio to Achieve Continuous Combustion
- Adjusting the Entry of the sample into the Flame Cell
- Setting Up the Flame Out Circuit
- Adjusting the Amplifier to Optimize Peak Amplitude
- FPD Chromatograms
- Routine Maintenance
- Fault Finding

Available On Request at Houston Texas or Dumyat Scotland [UK] or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

Rosemount Analytical 500 and 700 Gas Chromatographs (GC) - Advanced Process

Course R4311 **CEUs: 3.5**

Overview
This 5-day course is most valuable to those with three years of chromatography experience, or those who have completed the introductory 'Operation and Maintenance of Gas Chromatographs' course. Participants will develop an advanced understanding of gas chromatograph operation, troubleshooting, and maintenance. Training becomes customized when students present application information. Given that data, the experience instructor will look closely at specific applications and offer participants insight.

Prerequisites
'Introduction to Gas Chromatographs' course or equivalent knowledge.

Topics
- Understanding Chromatograph Flow Configurations
- Overhauling Valves
- Reviewing Thermal Conductivity, Flame Ionization, and Flame Photometric Detectors
- Understanding Sample/Carrier/Calibration Gas Systems
- Working With the 2350A Controller
- Installing and Using MON Software for Integration and Calibration
- Setting Timed Events, Retention Times, and Response Factor Calculations
- Understanding Startup Procedures
- Setting Valve Timing and Flows with Different Flow Configurations
- Checking for Proper Separation and Analyzing Gas Chromatographs
- Verifying Proper Operation of the Gas Chromatograph
- Troubleshooting the Chromatograph and 2350A Controller
- Configuring Reporting Details and Control Outputs
- Conducting Preventative Maintenance
- Communicating to Other Devices
- Reviewing Spare Parts Recommendations

Available On Request in Houston, TX or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

Rosemount Analytical 700XA Gas Chromatographs (GC) - Advanced Process

Course R4315 **CEUs: 3.5**

Overview
This 5-day course equips students with a full understanding of many advanced techniques used in process gas chromatography. An experienced instructor and focused material enable students to troubleshoot a variety of field issues.

Prerequisites
'Operation and Maintenance of Gas Chromatographs' course.

Topics
- Setting Valve Timing
- Hardware Troubleshooting
- Mixture Adjustments for FID
- Mixture Adjustment for FPD
- Proper Setting Timed
- Overview of Model 1500XA
- Liquid Sample Injection
- Review of Sample System Techniques
- Calibration and Accuracy Checks
- Recovery of GC After Analysis Interruption
- GC Start-up After Overhaul

Available On Request in Houston, TX or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

Rosemount Analytical 1500XA Gas Chromatographs (GC) - Advanced Process

Course R4316 **CEUs: 3.5**

Overview
This 5-day course equips students with a full understanding of many advanced techniques used in process gas chromatography. An experienced instructor and focused material enable students to troubleshoot a variety of field issues.

Prerequisites
'Operation and Maintenance of Gas Chromatographs' course.

Topics
- Setting Valve Timing
- Troubleshooting Hardware
- Understanding Mixture Adjustments for FID/FPD
- Setting Timed Events
- Reviewing Liquid Sample Injection
- Reviewing Sample System Techniques
- Performing Calibration and Accuracy Checks
- Recovering GC After Analysis Interruption
- Starting Up and Overhauling the GC

Available On Request in Houston, TX or On-Site

Classes typically start at 1 pm on Monday and end at 12 pm on Friday to accommodate travel.

For Rosemount Analytical training info please refer to the appropriate contact on page 118.
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