

Process Analyzers CEMS System Overview

General Information

Course Code: PIA-PACONAC1
Length: 3 Days

Audience

This course is intended for individuals responsible for the maintenance and operation of Siemens Ultramat 6, Oxymat 6 and Noxmat 6 Continuous Gas Analyzers (CGA) in Continuous Emissions Monitoring Systems (CEMS).

Profile

2.0 CEUs (Continuing Education Credits)

In this course students will setup and calibrate the Ultramat 6, Oxymat 6 and Noxmat 6. They will configure these analyzers using the front panel display. This course covers hardware and software associated with each analyzer - Ultramat 6, Oxymat 6 and Noxmat 6. This course also covers sample systems associated with each analyzer and sample systems used in CEMS applications.

This course can be taught at the customer's site and customized to meet the customer's needs. With advance notice, customer specific applications can be taught.

Objectives

Upon completion of this course, the student shall be able to:

- Calibrate Ultramat 6, Oxymat 6 and Noxmat 6 analyzers
- Replace the primary modules in these analyzers and the CEMS sample system.
- Perform a bench alignment on the Ultramat 6
- Set parameters in the 6 series analyzers thru the HMI.
- Clean the detector cells

Topics

1. Sample Systems
 - a. Disassembly & Assembly
 - b. Speed Loops
 - c. Gas sample probe
2. Sample gas cooler
 - a. Operation & Parts replacement
 - a. Condensation Outlet
 - b. Operation & Adjustments
3. Liquid membrane separator
 - a. Membrane replacement
4. Condensation monitors

- a. Flow meters, flow controllers
- a. Filter replacement
- b. Balston coalescing filters
5. ULTRAMAT
 - a. Calibration
 - a. Cell Cleaning
 - b. Condensate Trap
 - c. Pneumatic Pump
 - d. Bench Disassembly
 - e. Panel Operation
 - f. Software
 - g. Maintenance
 - h. Electronic Board Identification
 - i. Analyzer Bench Identification
 - j. Infrared Analysis
 - k. Principles of Operation
6. OXYMAT
 - a. Calibration
 - a. Cell Cleaning
 - b. Bench Disassembly
 - c. Panel Operation
 - d. Software
 - e. Maintenance
 - f. Electronic Board Identification
 - g. Analyzer Bench Identification
 - h. Paramagnetic Oxygen
 - i. Principles of Operation
7. NOXMAT
 - a. Calibration
 - a. Cell Cleaning
 - b. Bench Disassembly
 - c. Panel Operation
 - d. Software
 - e. Maintenance
 - f. Electronic Board Identification
 - g. Principles of Operation
8. Data Acquisition Systems
 - a. Maintenance
 - a. Principle of Operation
9. Labs
 - a. Calibration
 - a. Hardware Assembly
 - b. Hardware Disassembly
 - c. Software and Communications
 - d. Familiarization and Identification of Hardware and Parts