Configuring and Testing Smart Field Devices Course

Venue Information

Venue: London UK

Place:

Start Date: 2025-10-27

End Date: 2025-10-31

Course Details

Net Fee: £4750.00

Duration: 1 Week

Category ID: EAPET

Course Code: EAPET-6

Syllabus

Course Description

This five days course offers a broad perspective of smart field devices, including transmitters and valve-positioners. The emphasis is on more reliable information gathering, decreased maintenance time, ease-of-use, and multi-tasking capabilities. You will cover use in conventional systems, and enhancements/improvements when combined with digital control networks.

Course Objectives

Participant will be able to:

- Differentiate between analog and digital instruments
- Understand how digital signal sampling works in digital instruments
- Identify the strengths and weaknesses of digital instruments
- Explain the basics of serial digital communications

- Recognize the capabilities of HART™ communication
- Understand digital multivariable transmitter

Course Outlines

Analog vs. Digital Instruments:

- Analog Limitations
- Calibration of Analog vs. Digital Instruments
- Flexibility of Digital Instruments

Digital Signal Sampling:

- Sampled Signal Characteristics
- Output of A/D Converter
- Slow Sampling

Strength and Weaknesses of Digital Instruments:

- Effect on Performance
- Multiple Measurement
- Programming for Field Level Control
- Future Development

Intelligent Control Valves:

- Digital Positioners
- Diagnostic Tools
- Adding PID Controllers to Control Valves

Serial Digital Communications:

- Parallel to Serial Converter
- Modem

HART Communication:

- Features
- Master/Slave Communications
- Point-to-Point
- Capabilities of HART

SP50 Fieldbus:

- What It Is
- How Instruments Operate

Intelligent Multivariable Transmitters:

- How they work
- How they can transmit multiple variables