



Analytical Instrumentation & Maintenance Systems

AIMS Specialist Training – Instrument Workshop & Documentation

Course Name: Instrumentation Level 2

Duration: 10 days

1. Instrumentation Drawing

- 1.1 Process Flow and Heat / Mass Balance Data
- 1.2 Control / Measurement schemes
- 1.3 Process (Piping) and Instrumentation Diagrams
- 1.4 Plant Specification
- 1.5 Instrument Data sheets
- 1.6 Junction Boxes, Cabinets and other enclosures
- 1.7 Plant Interfacing Documents
- 1.8 Piping & Flanges Classes, Insulation & Cladding
- 1.9 Process, pneumatic and Hydraulic hook up
- 1.10 Instrument Cabling and Layouts

2. Instrument Installations Practical Sessions

- 2.1 Hazardous area Class and Ex IP ratings
- 2.2 Plant Safety Permit systems
- 2.3 Tools and tackles in instrumentation
- 2.4 Heat Tracing and other specific techniques
- 2.5 Tube bending and pneumatic and hydraulic tube connections
- 2.6 US and Optical Diagnostic Instruments Usage
- 2.7 Network and Signal Analysis

3. Field and Secondary Instruments Calibration

- 3.1 Temperature Scale and Traceability and Calibration
- 3.2 Pressure calibration
- 3.3 mV & mA Calibration
- 3.4 Multichannel Calibration





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4. Instrument Installations

- 4.1 Piping & Flanges Classes, Insulation & Cladding
- 4.2 Process, pneumatic, hydraulic and sampling hook up
- 4.3 Instrument cabling and layouts
- 4.4 Tools and tackles in instrumentation
- 4.5 Heat Tracing and other specific techniques

5. Calibration & Testing

- 5.1 Basic Electronic and Pneumatic Tools and Instruments
- 5.2 US and Optical Diagnostic Instruments
- 5.3. Temperature Scale and Traceability and Calibration
- 5.4 Pressure Calibration
- 5.5 Analytical Calibration
- 5.6 Typical Suite Site Testing

