

تحديد اعطال الاجهزة الدقيقة ونظم التحكم

TROUBLESHOOTING INSTRUMENTATION & CONTROL SYSTEM

DURATION

3 Days

PARTICIPANTS

- Engineers and technicians involved in maintenance, designing, constructing, commissioning or operating oil and gas facilities

PURPOSE

- To provide a comprehensive knowledge of Troubleshooting instrumentation & control system

WAYS AND MEANS

- Several applications and illustrations including power point and videos
- Use of dynamic simulations

COURSE CONTENT

- Purpose & Reasons for Troubleshooting
- Reliability centered maintenance RCM.
- Correct use of Instrument Loop drawings, P&ID's, Instrument data sheets, Logic drawings, Relay logic drawings to aid fault diagnosis.
- Approaches to Troubleshooting: Equipment History, Input/output and Logical Analysis
- Logical Analysis Troubleshooting: Verify, Identify, Repair, Test, Follow-up on Problems
- Single-Loop Feedback Control Troubleshooting: Measurement Concerns, Valve Concerns, Controller Operations, and Signal Conditioners.
- Multi-Loop Control Systems Troubleshooting: Ratio (Controlled Stream, Wild Stream), Cascade (Primary and Secondary Loop), Three-Element Drum Level Control.
- Use of plant DCS/PLC systems to aid fault diagnosis.
- Use of 375 and 475 Hart/Fieldbus Communicators to aid fault diagnosis.
- Start-up Concerns: loop test, Documentation, Tuning Review, Component Check-out