

Course Overview:

To give participants better and deep understanding of practical control loops problems.
To provide participants with the most accurate diagnostic methods to identify and to solve their difficult control loops problems

Course Objective:

- Understand The Fundamentals Of Closed Loop Control Used In Used In The Field Of Process Control
- Define Such Terms As Process Lag, Capacitance And Resistance
- Gain An Insight Into The Process Reaction Curve
- Appreciate The Effects Of Different Valve Characteristics On The Loop Performance
- Fully Appreciate The Effects Of Proportional, Integral And Derivative Control

Course Outline:

- THE NATURE OF PROCESS PROBLEMS AFFECTING PERFORMANCE
- EFFECT OF MAINTENANCE/OPERATIONS STRATEGY
- REAL PROCESS CHARACTERISTICS.
- CONTROL CHARACTERISTICS.
- FINAL CONTROL ELEMENT CHARACTERISTICS.
- DIFFICULT CONTROL LOOP PROBLEMS
- FUNDAMENTALS OF TUNING
- SELF TUNING LOOPS
- ADAPTIVE CONTROL
- EXCESSIVE HYSTERESIS.
- STICKY CONTROL VALVES.
- NOISY MEASUREMENT SIGNALS.
- CONTROL LOOP INTERACTION.
- PRACTICAL CASE STUDY.
- CONTROL LOOP ANALYSIS
- PROCESS CLASSIFICATION.
- NOISE EVALUATION.
- DYNAMIC COUPLING EVALUATION.
- TOOLS OF CONTROL PROBLEM DIAGNOSIS:
- CLOSED LOOP TESTING AND ANALYSIS.
- PID CONTROL

Who Should Attend:

- Automation Engineers, Chemical Engineers, Consulting Engineers, Electrical Engineers, Electricians
- Installation and Maintenance Technicians, Instrument and Process Control Engineers and Technicians
- Maintenance Engineers, Mechanical Engineers and Technicians, Operations Engineers, Process Engineers

Training Language:

Eng

Training Methodology:

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation