

Process Control and safety system (PLC, DCS, ESD & F&G systems)

DURATION

3 Days

PARTICIPANTS

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

PURPOSE

- To provide a comprehensive knowledge of process control and safety systems including PLC, DCS, ESD & F&G systems.

LEARNING OBJECTIVES

- To understand control loops and safety loops, as well as ICSS and associated equipment technologies
- To comprehend technology and operating principles of instruments most commonly used in the oil and gas industry
- To understand impact of PID controllers parameters on process control
- To grasp main process control structures encountered in oil and gas surface processing
- To understand the outline of a typical DCS PLC, DCS, ESD & F&G systems architecture
- To learn the functions of safety instrumented systems and safety integrity levels SIL.

WAYS AND MEANS

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

COURSE CONTENT

- Fundamentals of control and safety system
- Instrumentation documentation
- Field measurement devices
- Final elements and actuators
- Pressure relief and pressure regulation
- Control system
- PID Parameters and tuning
- Distributed control systems (DCS)
- Hazardous areas and equipment selection
- Safety instrumented system.
- Functional safety and examples of how to calculate SIL
- Programmable logic controllers(PLC)
- ESD
- F&G systems