

CPD TRAINING COURSE

PROCESS CONTROL VALVES; SIZING, SELECTION & APPLICATION



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Learning Objectives

This course will provide an insight to control valves which is typically the final control element in the control loop. It will review the principles of control valves, actuators, positioners and related accessories. Each delegate will learn through active participation using exercises and practical sessions covering the different types of control valves. Valve sizing will be done to ANSI/ISA 75 and IEC 60534 standards for both compressible and incompressible applications. This will ensure that control valves are appropriately sized, selected and operated for end use.

Course Programme

The primary objective is to give each delegate a practical understanding of valves, actuators and accessories through a comprehensive look at the design and application of valves as an integral part of the piping system. Control valves as the final control element in a process control system will be covered as well as essential maintenance and installation guidance.

The course will cover, but is not limited to:

- Introduction to control valves
- Control valve Types – Sliding Stem or Rotary
- Actuators – Diaphragm, Piston and Rotary
- Comparison of Control Valves and Actuator types
- Packing types and application
- Positioners types and application, I/P converter
- Compressible and Incompressible Valve Sizing – Manual and Software
- Control Valve Characteristics – Inherent and Installed
- Control Valve Cavitation, Erosion and Flashing
- Control Valve Noise
- Severe Service Control Valves
- Valve Application Guidelines
- Control Valve Data Sheet
- Installation and Maintenance

Who Should Attend?

This course is focused to the needs of chemical, instrumentation, maintenance, and mechanical engineers and technicians involved in the selection, sizing, specification, installation, operation and maintenance of shutoff, pressure relief, actuators, control valves and control valve accessories. The industries that this course would be relevant to include biopharma, food, water and waste water, chemical and power generation.