Safety Relief Valve Sizing, Selection, Operation, Inspection, Maintenance & Troubleshooting (PRV & POPRVPORV).

Course Desciption:

Within the boiler, piping and pressure vessel industry, control and safety relief are of Most essential importance. Pressure relief valves are the last line of defense against Catastrophic failure or even lose of life.

The course covers control and safety valve types And designs, materials, specification and selection, preventive maintenance procedures,Operation and troubleshooting.

The course provides a basic and specialized knowledge of valve types and designs,Materials used to make valves, where various designs should and should not be used,Factors to consider in specifying a valve for a specific application, how to calculate flow Through valves, and valve maintenance and repair. In addition to presenting information

On a wide variety of valves, this course also explains the operational basics of the great Variety of valves that are found in power stations, refineries, plants, and mills throughout The world.

A number of different instructional methods are used throughout the course to allow Interactive learning and to give practical examples from manufacturing and service Industry to enable the delegates to operate, select and troubleshoot control and safety Valves upon course completion.

Who Should Attend?

The course is designed for engineers, operators, and maintenance technicians in the power generation, oil, chemical, paper and other processing industries involved in valve selection, specification, procurement, inspection, troubleshooting or repair.

Course Objectives:

- Familiarize participants with the functions and applications of control and safety
- Relief valves, their types, designs and components.
- Introduce the participants to normal valve operation, bypass operations, abnormal
- Conditions, inspection and preoperational checks.
- Enable appropriate control and safety valve sizing and selection for liquid, gas
- And vapour applications.
- Train participants to install, disassemble, clean, inspect, align, and reassemble a Variety of control and safety valves.

Course Outline:

REGISTRATION

Fundamental principles

- Hydraulic fluids and their properties
- Hydraulic pumps and intensifiers
- Basics of hydraulic flow in pipes

- Air and gas basics
- Compressors and fans
- Pneumatic components and circuits
- Pressure measurement
- Hydraulic valves and circuits

- Standard definitions

- Modular valving

- Electro hydraulic valves

- Servo valves.

Valve Selection and Sizing

- Control valve types
- Directional control valves
- Pressure control valves
- flow control valves
- Safety relief valves
- Valve material
- Gate valves
- Globe valves
- check valves
- Butterfly valves
- Ball valves
- plug valves
- Diaphragm valves, sizes, classes, and ratings,
- Valve selection, function and selection, process applications, valve selection Factors,
- Valve design, control valve trim, control valve safety, valve sizing for liquid, gas And vapor applications.

Valve operation

- Preoperational checks,

- Normal operations,
- bypass operations,
- Valve inspections
- Abnormal valve conditions, and automatic valve operation
- Safety valve operation, disassembly, removing the disc assembly, blue checking The seat and disc
- performing spindle run out, reassembly, installation, and setting

Valve troubleshooting and maintenance

- Methods for evaluation of mechanical components, mechanical components,Electrical components
- removing a valve actuator, disassembly, and reassembly
- limit switch adjustment
- torque switch adjustment
- Operational tests
- Mechanical troubleshooting, and electrical troubleshooting
- accepted methods for cleaning
- adjusting and lubricating various components
- Codes and recommended standards of practice, fault finding instruments,preventive maintenance.