

## PD583

### Pressure Relief Devices: Design, Sizing, Construction, Inspection and Maintenance

#### Day One

- History of pressure relief devices, definitions, and common terminology
- Requirements of codes and standards, such as ASME, API, and NBIC
- Types of pressure relief devices, such as pressure relief valves, safety relief valves, safety valves, and rupture disks
- Materials for pressure relief valves, rupture disks, and bill of materials
- ASME design fundamentals for components, testing, and marking
- Manufacturing, as per code requirements, test laboratories, and capacity certification
- Sizing and selection of PRDs for single phase flow based on ASME and API Code
- Videos on various types of pressure relief devices

#### Day Two

- Sizing and selection workshop; calculations of orifice areas, and selection of pressure relief devices
- Safety valves for power boilers, and heating boilers
- Pressure relief devices for pressure vessels, and nuclear systems
- Pressure relief devices for transport tanks
- Pressure relief devices for refinery vessels, and atmospheric tanks
- Pressure relief valves for power piping, and process piping
- Pressure relief devices for cryogenic systems, and refrigeration systems
- Pressure relief devices for non-ASME systems, such as vacuum systems, and compressed gas systems
- Pressure relief devices for pneumatic systems, and hydraulic systems

#### Day Three

- Handling and storage of pressure relief devices
- Installation of inlet piping, discharge piping, and vent piping
- Maintenance procedures, types of maintenance, testing, and troubleshooting
- Inspection, authorized inspectors, types of inspection, records, and reports (NBIC and API)



- Repairs and alterations, records and data maintenance, and National Board “VR” certification program
- Shop testing, test media, test stands, test reports, and testing facilities
- A video on pressure relief valve installation