



API 576 – PRESSURE-RELIEVING DEVICES



BUILDING COMPETENCE, INSPIRING CONFIDENCE



Course Overview

This two-day training program is designed to provide participants with a practical and comprehensive understanding of pressure-relieving devices in accordance with API 576. The course focuses on operation, inspection, maintenance, troubleshooting, and best practices to ensure safety, reliability, and compliance in industrial facilities.

Target Audience

- Maintenance & Inspection Engineers
- Mechanical & Reliability Engineers
- Technicians and Supervisors
- QA/QC and Asset Integrity Personnel
- Operations Staff involved with pressure relief systems

Fundamentals & Types of Pressure-Relieving Devices

Module 1: Introduction & Basic Terminology

- Purpose and importance of pressure-relieving devices
- API 576 scope and application
- Key terminology and definitions

Module 2: Pressure Relief Systems

- Overview of pressure relief systems
- System components and functions
- Common system configurations

Module 3: Reclosing Relief Devices

- Spring-loaded pressure relief valves
- Operating principles
- Applications, advantages, and limitations



Fundamentals & Types of Pressure-Relieving Devices

Module 4: Pilot-Operated Pressure Relief Valves

- Construction and working principles
- Types of pilot-operated valves
- Selection criteria and applications

Module 5: Non-Reclosing Relief Devices

- Rupture disks and rupture disk assemblies
- Advantages, limitations, and installation considerations
- Combination devices

Maintenance, Workshop Practices & Troubleshooting

Module 6: Maintenance & Calibration

- Inspection intervals and methods
- Testing and calibration requirements
- Common maintenance issues

Module 7: Record Keeping & Spare Parts Management

- Maintenance and test records
- Documentation best practices
- Spare parts identification and inventory control

Module 8: Workshop & Handling Practices

- Rigging and transportation of valves
- Use of Teflon tape and gaskets
- O-ring identification and selection



Maintenance, Workshop Practices & Troubleshooting

Module 9: Repair & Conditioning Techniques

- Lapping techniques and surface finish requirements
- Hardness testing and material verification

Module 10: Common Issues & Solutions

- Typical PSV problems and failure modes
- Root cause analysis
- Practical solutions and preventive measures



Learning Outcomes

Upon completion of this course, participants will be able to:

- Understand the principles and types of pressure-relieving devices
- Apply API 576 guidelines for inspection, testing, and maintenance
- Identify common PSV issues and implement effective solutions
- Improve reliability, safety, and compliance of pressure relief systems
- Maintain accurate records and manage spare parts effectively

Instructor



Mr. Aftab Ahmed Mazari **Instrumentation Expert**

Mr. Aftab Ahmed Mazari has over 43 years of extensive practical experience as an Instrument Engineer. He completed his science graduation from Punjab University and received industrial instrumentation training from Russia.

He began his professional career at Pakistan Steel, where he served for 10 years. He later joined Fauji Fertilizer Company (FFC) and retired after completing 30 years of service with rich and diverse experience. Following his retirement, he worked as an Instrument and Consultant Engineer with SABIC in Saudi Arabia for one year.

Mr. Aftab Ahmed Mazari possesses wide expertise in instrumentation consultancy, Reliability Centered Maintenance (RCM), reliability engineering, and professional training. He has delivered training programs and courses to both local and international clients, including SABIC in Saudi Arabia and multinational companies such as ENI, Lotte, BHP, Engro, and HUBCO.

He has developed several training aids for instrument engineers and technicians, including simulators and training rigs such as vibration simulators, vibration switch testing rigs, speed simulators, compound gear simulators, and SOV training rigs. In addition, he has designed and produced cutaway models of control valves, pressure safety valves (PSV), rotameters, temperature sensors, pressure regulators, volume boosters, and trip relays.

Mr. Aftab Ahmed Mazari has also authored eight industrial instrumentation books for instrument and operations personnel, which are widely referred to in various industrial facilities across Pakistan.

Logistics

Duration

2 days

Location

Client site or Lahore

Training Instructors

Mr. Aftab Ahmed Mazari

Get in Touch

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