

## SAFETY RELIEF VALVES MAINTENANCE & REPAIRS

“Ensuring Process Safety and Equipment Integrity through Reliable Valve Maintenance Practices”

### Schedule

Date	Venue	Fees (Face-to-Face)
03 - 05 Feb 2026	Manama, Bahrain	USD 2495 per delegate
14 - 16 Jul 2026	Manama, Bahrain	USD 2495 per delegate
22 - 24 Dec 2026	Doha, Qatar	USD 2495 per delegate

► Available delivery methods: Face-to-Face & Online Training

### Introduction

Safety relief valves (SRVs) are critical protective devices in pressurized systems, designed to prevent catastrophic equipment failure due to overpressure. Their performance directly affects the safety of personnel, equipment, and the environment. Improper maintenance or repair can lead to dangerous system failures, production losses, or regulatory non-compliance.

This three-day technical training course equips participants with the practical knowledge and skills required for effective inspection, maintenance, repair, and testing of safety relief valves. The program covers valve types, standards (API, ASME), troubleshooting methods, and certification procedures, with a focus on real-world application in oil & gas, petrochemical, and industrial settings.

### Objectives

By the end of this course, participants will be able to:

- Understand the function, design, and operating principles of various SRVs
- Identify valve types, specifications, and service applications
- Perform effective inspection, maintenance, and in-line testing of safety valves
- Diagnose valve failures and implement safe repair procedures
- Comply with industry standards such as API 526, API 527, and ASME Section VIII

## Why Attend

- Enhance plant safety through proper maintenance of pressure relief systems
- Minimize unplanned shutdowns due to valve malfunction or failure
- Learn how to troubleshoot and refurbish SRVs to OEM and regulatory standards
- Improve regulatory compliance and documentation readiness
- Gain hands-on exposure to common valve repair practices

## Target Audience

This program is designed for:

- Mechanical, maintenance, and instrumentation technicians
- Plant engineers and rotating equipment specialists
- Valve technicians and workshop repair personnel
- QA/QC inspectors and maintenance supervisors
- Professionals working in oil & gas, power, chemical, and process industries

## Individual Benefits

Key competencies that will be developed include:

- Identification of SRV types and failure modes
- Execution of proper disassembly, cleaning, lapping, and assembly
- Use of testing tools such as test benches, gauges, and leakage meters
- Understanding of blowdown, set pressure, and reseating dynamics
- Compliance with valve tagging, traceability, and certification requirements

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced risk of overpressure-related accidents and regulatory violations
- Improved valve reliability, performance, and service life
- Cost savings through in-house inspection and repair capabilities
- Enhanced documentation, tagging, and audit compliance
- Consistent application of global standards across valve maintenance teams

## Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Functional theory and maintenance standards of SRVs
- Case Studies - Failure analysis and lessons learned from real incidents
- Workshops - Disassembly, inspection, and reassembly exercises (photo-based or hands-on)
- Peer Exchange - Group discussions on field challenges and repair decisions
- Tools - Templates for valve maintenance records, inspection logs, and certification forms

## Course Outline

### Detailed 3-Day Course Outline

**Training Hours:** 07:30 AM – 3:30 PM **Daily Format:** 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

#### Day 1: Valve Fundamentals and Functional Requirements

- Module 1: Introduction to Safety Relief Valves (07:30 – 09:30) • Purpose and types of pressure relief devices • Components, terminology, and pressure control principles
- Module 2: Codes, Standards & Certification (09:45 – 11:15) • API 520/521/526/527, ASME Section VIII, ISO • Legal and compliance obligations
- Module 3: Valve Selection and Sizing Basics (11:30 – 01:00) • Flow calculations, set pressure, and overpressure limits • Matching valve type to process application
- Module 4: Workshop – Valve Type Identification (02:00 – 03:30) • Review valve photos/spec sheets and determine application suitability

#### Day 2: Inspection, Maintenance & Testing Procedures

- Module 1: Inspection and Condition Assessment (07:30 – 09:30) • Visual, dimensional, and functional checks • In-line vs workshop inspections
- Module 2: Valve Disassembly and Cleaning (09:45 – 11:15) • Safe removal practices • Common wear signs and contamination
- Module 3: Repair and Assembly Techniques (11:30 – 01:00) • Lapping seats, replacing gaskets/springs/discs • Torque requirements and testing tools
- Module 4: Workshop – Simulated SRV Maintenance Task (02:00 – 03:30) • Rebuild checklist exercise based on sample failure case

#### Day 3: Troubleshooting, Testing & Documentation

- Module 1: Valve Failure Modes and Root Causes (07:30 – 09:30) • Leakage, sticking, premature opening, backpressure issues • Troubleshooting sequences
- Module 2: Pressure Setting and Leakage Testing (09:45 – 11:15) • Hydrostatic vs pneumatic testing • Bench test setup and test procedure
- Module 3: Documentation and Traceability (11:30 – 01:00) • Tagging, serial numbers, repair records, and test certificates
- Module 4: Certification and Wrap-Up (02:00 – 03:30) • Final course review, open Q&A, certificate distribution

## Certification

Participants will receive a Certificate of Completion in Safety Relief Valves Maintenance & Repairs, validating their technical capability to inspect, maintain, repair, and test SRVs in accordance with industry best practices and regulatory standards.

## Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

### In-House / Customized Training

Interested in running this course for your team?  
Please contact us:

TEL:

**+601116373203**

EMAIL:

**info@mawaevents.net**