XCELERATE TRAINING INSTITUTE
your learning & development partner

MECHANICAL ENGINEERING

# Pressure Safety Valve, Actuators and Regulators – Inspection and Maintenance Training Course

| DURATION | LANGUAGE | FORMAT |
|---|---|---|
| **5 days** | **English** | **Classroom / Online** |

## Upcoming dates

| Dates | Venue | Format | Fee |
|---|---|---|---|
| 4 – 8 ????? 2027 | Live online | Online (live) | **€1?200** |
| 8 – 12 ?????? 2027 | Geneva | Classroom | **€4?800** |
| 12 – 16 ????? 2027 | Live online | Online (live) | **€1?200** |

### Register or ask a question

Online: x8ti.com/course/pressure-safety-valve-actuators-and-regulators-inspe…
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# Pressure Safety Valve, Actuators and Regulators – Inspection and Maintenance Training Course

## Introduction

Introduction

A pressure safety valve is a relief device present on a compressible fluid- or gas-filled vessel. The opening of this valve is sudden and automatic once the set pressure on the valve is reached. The main objective of pressure safety valves is to protect life and property against failure to control system pressures.

Actuators, on the other hand, are those components of machines that are responsible for moving and/or controlling systems. They require a control signal and a source of energy. Regulators are devices that reduce the input pressure of a fluid to a desired value at the output.

This Xcelerate Training Institute course will empower you with all necessary information and knowledge about pressure safety valves, actuators and regulators.

Through this course, you will acquire the skill, confidence and experience to troubleshoot any issues or problems your organization faces with the three devices, thereby providing expert skill and assistance and securing opportunities for growth and progression across the organization.

Learning Objectives

- detailed information and knowledge about the inspection and maintenance of pressure safety valves, actuators and regulators
- the required confidence and knowledge to direct others and train them on working with pressure safety valves, actuators and regulators
- the ability and experience to detect issues in any of the three devices and take corrective action well in time to prevent occupational hazards and loss to property and life
- the necessary awareness and knowledge of required standards and guidelines of operation and use of pressure safety valves, actuators and regulators to ensure that safety is not compromised
- the understanding and knowledge to set up equipment containing these devices most appropriately and safely to ensure optimal and safe operation
- the skill and capabilities to address any maintenance-related issues with these devices in house and save maintenance costs for the organization, thereby contributing to organizational growth
- a sense of pride to be able to contribute to employee health and safety in the organization through regular inspections and maintenance
- the required skill set and capabilities to assume higher roles and responsibilities and work with any machine or equipment employing pressure safety valves, actuators and regulators, thereby enriching one’s professional portfolio leading to greater career opportunities within and outside one’s current organization

Training Methodology

Xcelerate Training Institute offers training courses across a wide range of topics, and great care is taken to ensure that these courses are customized to suit the intended audience. Thus, the content is thoroughly reviewed and revised, if necessary, before the commencement of each training program.

A highly experienced professional from the relevant domain delivers the training using detailed audio-visual presentations for ease of reference. Trainee participation is encouraged through group discussions, projects, role-plays, etc. Relevant case studies are also discussed to help trainees relate course content to practical scenarios.

Benefits for Your Organization

- Better maintenance of pressure safety valves, actuators and regulators because of trained and experienced professionals overseeing these aspects
- Regular inspection to check for possibilities of wear and tear that could damage property and life if not attended to in time
- Adherence to international standards and regulations of safety and operation of these devices
- Reduced operational and maintenance costs, fostering growth and development of the organization
- Regular training of all employees working on equipment employing pressure safety valves, actuators and/or regulators to ensure each employee maintains the required level of safety and awareness to prevent hazards
- Better risk assessment and management
- Reduction in outsourcing costs for maintenance and repair of pressure safety valves, actuators and regulators because of better operational practices increasing machine life and maintenance and repair undertaken by experienced professionals of the organization
- Greater organizational credibility because of better employee health and safety practices and effective risk assessment and management

Benefits for You

- Thorough understanding and increased knowledge of inspection and maintenance of pressure safety valves, actuators and regulators
- Increased confidence and experience to troubleshoot and resolve all issues being faced with equipment employing pressure safety valves, actuators and/or regulators
- Greater ability to curtail damage to life and property through appropriate maintenance of the three devices
- Increased capability to contribute to organizational growth through machine longevity and reduced operational and maintenance costs
- Increased confidence and knowledge to train other professionals on best practices and safety measures when working with equipment and these devices
- Enhanced foresight and experience to foresee challenges and take timely action to prevent damage to property and life or impact to the delivery timeline
- A sense of satisfaction from contributing to increased employee health and safety through safe and secure operational and maintenance practices
- Greater understanding and awareness of international guidelines and practices to be followed when operating these devices

- Enhanced skill set and capabilities to manage higher roles and responsibilities involving operation and maintenance of pressure safety valves, actuators and regulators, thereby inviting greater opportunities for career progression within and outside the organization

Target Audience

- Engineers and other professionals involved in the operation of equipment containing pressure safety valves, actuators and/or regulators
- Suppliers and vendors of pressure safety valves, actuators and regulators
- Senior management of an organization who need to understand the importance of maintenance of these devices for health and safety
- Compliance officers and safety managers responsible for ensuring adherence to all required standards and guidelines
- Managers and leaders overseeing operations involving machines and equipment employing pressure safety valves, actuators and regulators
- Any other professional who would like to know more about pressure safety valves, actuators and regulators

Course Outline

Types of Pressure Safety Valves as per Construction, Their Operation and Maintenance

- Dead-weight
- Lever-type
- Spring

Types of Pressure Safety Valves as per Operation and Their Maintenance

- Pneumatic
- Solenoid
- Steam

Types of Actuators

- Hydraulic actuators
- Pneumatic actuators
- Electric actuators
- Twisted or coiled polymer or super coiled polymer actuators
- Thermal or magnetic actuators
- Mechanical actuators

Performance Metrics of Actuators

- Force
- Speed
- Durability
- Operating conditions

Reasons for Preventative Maintenance of Actuators

- Increase reliability

- Identify problems before damage
- Reduce overall maintenance costs
- Reduce chances of major shutdowns
- Control and predict costs

Maintenance Guidelines for Actuators

- External visual inspection
- Oil level replenishment
- Mounting bolts, nuts, washers check
- Hand wheel check
- Historic performance data analysis
- Inspection of motor
- Inspection of electrical compartment
- Cover screw replacement
- Local and remote operation check

Components of Pressure Regulators

- Restricting element
- Loading element
- Measuring element

Types of Inspection Tests for Pressure Regulators

- Flow testing
- Lock-up testing
- Meter assembly leak testing
- Riser valve leak testing
- Internal relief valve testing

Maintenance Checks for Pressure Regulators

- Function test
- Inert purge
- Leak test
- Creep test

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# Registration Form

## Pressure Safety Valve, Actuators and Regulators – Inspection and Maintenance Training Course

Preferred dates: ..... Venue or online: .....

Duration: 5 days Language: .....

Please complete and email this form to us, or register online. We confirm your place and send the invoice within one working day.

### Delegate information

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Official email: ..... Personal email: .....

### Company information

Company name: .....

Address: .....

City / country: ..... VAT / tax number: .....

### Person responsible for training & development

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Email: .....

### Payment

☐ Please invoice me ☐ Please invoice my company

Signature: ..... Date: .....

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