



GLOBAL TRAINING
INSTITUTE

Safety Relief Valve

Excellence: Operate and Maintain with Confidence



GTI - Coordination Office and International Relations (Accredited Programs)



Course Description

The Safety Relief Valve Excellence: Operate and Maintain with Confidence training course focuses on the critical aspects of process safety in the design and operation of pressure equipment used in hydrocarbon and chemical processing industries. Emphasizing the principles of "Inherently Safer Design," this course provides essential knowledge for mitigating hazards and ensuring safe operations in Oil & Gas processing facilities. Participants will explore various methodologies for analyzing and addressing process safety hazards, with a strong focus on engineering design aspects and compliance with relevant standards.

Who Should Attend

This course is ideal for a diverse group of professionals involved in process safety and equipment management, including:

- Operations, Technical Service, and Maintenance Professionals
- Technical Professionals responsible for equipment maintenance and repair
- Project Engineers and HSE Professionals
- Professionals involved in risk assessment and integrity analysis
- Technical staff engaged in inspection and maintenance

Course Objectives

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

- Understand the various aspects of process design that influence process safety.
- Appreciate the concept of "inherently safer design" for entire process plant operations.
- Evaluate the mechanical integrity of process equipment.
- Identify hazards associated with process fluids and their impact on material degradation.
- Follow code requirements for sizing relief valves to manage relief streams.
- Operate Emergency De-Pressuring Systems (EDP) effectively in case of fire or gas explosions.
- Implement measures for risk mitigation and safety improvements in process design.

Course Content

Overview of Safety in Process Design

- Definition and significance of safety in process design.
- Historical incidents and problem areas in process safety.
- Components of process safety: People, Plant, Process.

Risk Identification and Safety Analysis

- Process Hazard Analysis methods: HAZOP, LOPA, FMEA.
- Hazards associated with specific plant systems.
- Strategies for eliminating hazards through effective design.

Inherently Safer Design Principles

- Methodology for inherently safer design.
- Pre-design and design phases considerations.
- Materials of construction and optimized fabrication techniques.

Safety of Process Equipment

- Hazards associated with process equipment and safety considerations.
- Design procedures for pressure vessels, storage tanks, and reactors.
- Assessment of material degradation during the equipment lifecycle.

Process Monitoring and Control

- Design of pressure relief systems and safety valves.
- Operation and sizing of pressure relief systems.
- Emergency de-pressurization systems and prevention of fire and explosion hazards.