MERCURY

Perfecting Process Safety Management
PSM

Dubai - UAE: +971 4 450 5697
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Perfecting Process Safety Management PSM

Introduction:

Process Safety Management PSM has been legislated with increasingly stringent standards to meet the increasing expectations of governments and the public for safe industrial operations. Despite these efforts, incidents continue to occur for various reasons, such as production pressures and cost-cutting measures.

This PSM process safety management course emphasizes the critical role that Managers and Engineers in Process Plants play. They must make informed decisions to prioritize safety and operational efficiency.

Competency in the field and continuous training in Process Safety are essential for preventing accidents and maintaining a high safety standard. This PSM process safety management training provides vital knowledge and skills to enhance safety competencies and operational effectiveness.

Targeted Groups:

- Process Managers.
- Process Engineers.
- Team Leaders.
- Maintenance Engineers.
- Health and Safety personnel.

Course Objectives:

By the end of this PSM process safety management course, participants will be able to:

- Define process safety management and explain its importance in the industry.
- Identify systems to prevent loss of containment.
- Analyze common risks and controls in Process Safety Management PSM.
- Discuss safe furnace operations.
- Appreciate the hazards of Start-Up and Shutdown procedures.
- Understand safe entry procedures for confined spaces.
- Design effective emergency response strategies.

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Targeted Competencies:

At the end of this PSM process safety management training, participants competencies will:

- Fundamentals of process safety.
- Systems to prevent loss of containment.
- Identifying common hazards, risks, and controls in the oil and gas industry.
- Furnace operations familiarity.
- Emergency Response planning and execution.

Course Content:

Unit 1: The Foundations of Process Safety:

- Introduction to Process Safety.
- Learning from Past Accidents.
- Good Practice Standards for the Process Industry EU and USA.
- Permit-to-work System.
- Shift Handover Principles.
- Case Study Inclusion.

Unit 2: Risk Management and Management of Change:

- Understanding the Risk Management Process and Safety Management tools used.
- The Swiss Cheese Model for Accident Causation.
- Conducting HAZOP studies for thorough risk assessments.
- Inherent Safer Design as a preventive approach.
- Effective Management of Change Procedures.
- Analyzing a Process Safety Management Case Study.

Unit 3: Combustion and Confined Space Entry:

- Furnace operation and safety in PSM environments.
- Control measures for different firing conditions.
- Process Safety Management training for Confined Space Entry.
- Steps for Cleaning, Isolating, and Atmospheric Testing.
- Training for confined space safety.
- Case Study to apply learnings.

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Unit 4: Start-Up, Shutdown, Hydrocarbon Storage, and Types of Fire and Explosions:

- Safe procedures for Start-Up and Shutdown.
- Managing Hydrocarbon Storage in Bund Areas.
- Utilization of Safety Instrumented Systems.
- Types of Fire and Explosions relevance in PSM - VCE, UVCE, BLEVE, and Boil Over.
- Integrating Learnings through a Case Study

Unit 5: Fire and Emergency Response:

- Passive vs. Active Fire Protection methods.
- Emergency Response preparedness and actions.
- Review and Evaluation of the learned Process Safety Management program elements.
- A concluding Case Study to reinforce the concepts.

Conclusion:

Participants who complete the course will be eligible for Process Safety Management certification, signaling their ability to understand and implement PSM elements effectively.

Process Safety Management PSM involves the disciplined framework for managing the integrity of operating systems and processes that handle hazardous substances. It aims to prevent unexpected releases of toxic, reactive, or flammable liquids and gases in highly hazardous chemical processes.