BLACKBIRD FOR TRAINING

Process Safety Management (PSM)

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Introduction

Process Safety Management PSM has become a cornerstone for organizations operating in high-risk environments such as oil and gas, petrochemicals, energy, and other industrial sectors. This course is designed to equip participants with the knowledge, tools, and strategies needed to design and implement effective safety systems that reduce the likelihood of incidents, protect people and assets, and ensure compliance with international standards.

Targeted at executives, team leaders, and specialists across diverse industries, this program emphasizes both strategic insights and practical applications of Process Safety Management PSM to support sustainable operational safety and organizational resilience.

Course Objectives

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

- Understand the core principles of Process Safety Management PSM.
- Apply systematic approaches to hazard identification and risk reduction.
- Analyze incident causes and apply lessons learned to prevent recurrence.
- Develop integrated strategies for compliance with international standards.
- Promote a strong organizational safety culture.
- Manage change effectively to maintain process safety.
- Build emergency preparedness and crisis management plans.

Course Outlines

Day 1: Fundamentals of Process Safety Management

- Defining PSM and its importance in high-risk industries.
- Differentiating process safety from occupational safety.
- Core components of a PSM program.
- International standards and frameworks OSHA, API, IEC.
- The role of leadership in driving safety initiatives.
- Case study: Lessons from process safety system failures.

Day 2: Hazard Identification and Risk Analysis

- Hazard identification methodologies HAZID, HAZOP.
- Quantitative and qualitative risk analysis techniques.
- Human and environmental factors in risk management.
- Leveraging data for proactive safety improvement.
- Software tools for risk analysis.
- Group exercise: Conducting a hazard analysis.

Day 3: Systems and Procedures for PSM

- Developing safety policies and procedures.
- Engineering and administrative control systems.
- Documentation and record management.
- Team roles and responsibilities in PSM implementation.
- Inspection and monitoring processes.
- Industry case studies from oil and gas operations.

Day 4: Management of Change and Emergency Preparedness

- Importance of change management in sustaining safety.
- Implementing MOC Management of Change frameworks.
- Emergency planning and rapid response systems.
- Coordination with regulatory bodies.
- Simulation drills for emergency and evacuation planning.
- Case studies of successful crisis management.

Day 5: Performance Evaluation and Continuous Improvement

- Key performance indicators for process safety.
- Reviewing incidents and applying lessons learned.
- Embedding a culture of continuous improvement.
- Reporting safety performance to stakeholders.
- Long-term strategies for sustainable process safety.
- Final presentations and program evaluation.

Why Attend this Course: Wins & Losses!

- Gain in-depth expertise in Process Safety Management PSM.
- Strengthen risk identification and mitigation capabilities.
- Foster a culture of safety and accountability across the organization.
- Learn to design and implement crisis management strategies.
- Improve compliance with global safety regulations.
- Apply knowledge through practical case studies and group exercises.
- Enhance organizational efficiency and resilience through safer processes.
- Reduce potential losses, downtime, and reputational risks.

Conclusion

Process Safety Management PSM is a critical framework for ensuring the safety, sustainability, and resilience of industrial operations. This program equips participants with practical tools and global best practices to design, implement, and continuously improve safety systems that minimize risks, protect people, and enhance compliance.

By the end of the course, participants will be prepared to embed PSM principles into organizational strategies, building a safer and more sustainable future for their institutions.