BLACKBIRD FOR TRAINING

Advanced Safety in Process Equipment Design and Operation

31 January – 4 February 2027
Sharm El-Sheikh (Egypt)

UK Traininig
PARTNER



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Introduction

Ensuring safety in the design and operation of process equipment is critical in industries where minor errors can lead to severe consequences. This Advanced Safety Training Course is specifically designed for technical professionals seeking to enhance their expertise using the latest advanced safety technology.

The course focuses on Process Safety Management PSM, advanced techniques for hazard identification, and the effective application of advanced safety equipment. By completing this program, participants will be well-equipped to earn an Advanced Safety Certificate and become proficient advanced safety professionals, enhancing their ability to manage risks, ensure compliance, and promote safe operations.

Course Objectives

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

- Understand Process Safety Management PSM: Integrate advanced safety technologies into operational practices.
- Conduct Process Safety Analysis PSA: Master advanced hazard identification and risk assessment techniques such as HAZOP, FMEA, and LOPA.
- Design Advanced Safety Equipment: Learn the principles of inherently safer design and the selection of safety instrumented systems SIS.
- Enhance Equipment Safety and Maintenance: Develop effective equipment safety plans and establish comprehensive operational guidelines.
- Develop Emergency Response Strategies: Create robust plans to prepare for and respond to emergencies while fostering continuous improvement in safety practices.



Course Outlines

Day 1: Fundamentals of Process Safety Management

- Introduction to Process Safety Management PSM: Integrate advanced safety technologies into workplace safety protocols.
- Documentation of Safety Procedures: Learn techniques for organizing and tracking equipment safety plans.
- Regulatory Compliance: Understand the basic safety equipment needed to meet industry standards.
- Building a Safety Culture: Develop strategies to instill a strong safety mindset across your organization.
- Organizing Process Safety Information: Learn methods for categorizing and prioritizing critical safety data.

Day 2: Risk Assessment and Management

- Advanced Risk Assessment Techniques: Master methods like HAZOP, FMEA, and LOPA.
- Forming Effective HAZOP Teams: Understand the key roles and responsibilities in successful HAZOP execution.
- Prioritizing Hazards: Use risk matrices to classify and rank hazards.
- Quantitative Risk Assessment: Gain skills in conducting detailed risk analyses to support decision-making.
- Incorporating Risk Assessments: Leverage findings from risk assessments to enhance safety equipment design.

Day 3: Designing Equipment for Safety

- Principles of Inherently Safer Design: Apply best practices for designing safety instrumented systems SIS.
- Relief Systems and Emergency Shutdowns: Learn the importance of these systems in ensuring process safety.
- Fire and Explosion Risk Mitigation: Explore design techniques that minimize fire and explosion hazards.
- Risk Ranking Techniques: Integrate advanced process safety analysis into equipment design strategies.

Day 4: Safe Operation and Maintenance

- Operational and Maintenance Best Practices: Establish guidelines for safe operation and maintenance of process equipment.
- Safe Work Procedures: Develop equipment safety training protocols and operational procedures.
- Process Hazard Analysis PHA: Conduct safety audits to maintain operational integrity and compliance.
- Human Factors in Safety: Analyze how human behavior impacts equipment safety and overall workplace safety.



Day 5: Emergency Response and Continuous Improvement

- Developing Emergency Response Plans: Learn to prepare for potential incidents effectively.
- Incident Investigation Techniques: Acquire methods to analyze incidents and implement lessons learned.
- Promoting Continuous Improvement: Encourage a safety-first culture while continuously refining safety measures.
- Case Studies and Best Practices: Review real-world examples to solidify understanding of advanced safety concepts.

Why Attend This Course: Wins & Losses!

- Gain an Advanced Safety Certificate, enhancing your credentials as an advanced safety professional.
- Master cutting-edge advanced safety technology and methods to ensure safe operations.
- Develop comprehensive equipment safety plans and functional safety processes to reduce risks.
- Improve organizational compliance with Process Safety Management PSM standards.
- Build a sustainable safety culture that supports innovation and operational excellence.

Conclusion

This Advanced Safety Technology and Process Safety Management Course provides the knowledge and tools you need to excel in ensuring the safety of process equipment and operations.

Whether you are seeking to enhance your professional skills, improve workplace safety, or earn your Advanced Safety Certificate, this course is a vital step toward achieving your goals. Join us to become a leader in advanced safety training, and take your career in safety management to the next level.

