



*Training Course:
Advanced Process Risk Assessment & Risk
Management*

*20 - 24 May 2024
Liverpool (UK)*

Training Course: Advanced Process Risk Assessment & Risk Management

Training Course code: HE7028 From: 20 - 24 May 2024 Venue: Liverpool (UK) - Training Course Fees: 5775 £ Euro

Introduction

The foundation of health, safety, and environmental management systems is a proactive approach to incident prevention and a reactive approach to performance monitoring. All actions that have an effect on health and safety, production, assets, the environment, or the company's reputation must be subject to risk assessment. This seminar will teach you how to:

- Improve your practical skills in applying advanced risk assessment techniques relevant to the process industry
- Effectively balance risk against cost to optimize risk reduction measures
- Motivate your people for improved safety culture
- Appreciate the role of Quantified Risk Assessment and major hazards
- Apply root-cause analysis to incident investigation and analysis

Course Objectives of Advanced Process Risk Assessment & Risk Management

- Recognize the difference between hazard, risk, and risk assessment
- Learn how to evaluate different types of risk
- Develop the skills of applying advanced risk assessment techniques relevant to the process industry
- Develop a strategy for planning and implementing risk reduction action plans
- Appreciate the contribution of human error to accidents
- Be able to apply advanced techniques for root-cause analysis for incidents

Course Methodology of Advanced Process Risk Assessment & Risk Management

Participants will learn by active participation during the program through the use of exercises, syndicate and group discussions, training videos, and discussions on relevant types of accidents and "real-life" issues in their organizations.

Course Summary of Advanced Process Risk Assessment & Risk Management

The curriculum seeks to give students practical experience using cutting-edge risk assessment methods in all facets of the process sector. In terms of fire, explosion, and toxic discharges, it analyzes the effects of significant dangers. Utilizing cutting-edge commercial software, these are modeled. Methods for encouraging a healthy safety culture in your workplace consider the role that human error plays in accidents.

The function of analytical investigation and root-cause analysis based on fault tree analysis is also explored throughout this training session.

Participants will be able to put their newfound abilities to use in the implementation of the company's HSE Management System. Your organization should be able to implement, evaluate, and review your professional

development in addition to other aspects of HSE action plans.

Course Outlines of Advanced Process Risk Assessment & Risk Management

DAY 1 - Advanced Risk Assessment Techniques 1: HAZOP

- Introduction to hazards identification and analysis techniques
- Techniques for hazard identification and analysis- HAZOP
- Syndicate exercise- application of HAZOP to batch and continuous processes
- Integrating HAZOP within the risk management system
- Review of commercial HAZOP software

DAY 2 - Mechanics of Fire, Explosion, and Toxic Releases

- The role of consequence analysis in QRA
- Types of Fires: Jet flame, pool fire, flash fire, BLEVE
- Types of Explosion: VCE, UVCE, pressure burst, dust explosion
- Vulnerability analysis
- Commercial software for modeling releases, fire, explosion, and toxic releases

DAY 3 - The role of Quantified Risk Assessment [QRA]

- Failure Modes & Effects Analysis [FMEA]
- Decision trees and Event Tree Analysis [ETA]
- Sources of failure data
- Fault Tree Analysis [FTA]
- Quantification of ETA and FTA
- Evaluation of Individual and Societal Risks

DAY 4 - Advanced Incidents Investigation Techniques

- The human contribution to accidents
- The role of root cause Analysis in identifying management system failures
- Accident investigation techniques
- Latent failure and root causes for incidents
- Techniques for root-cause analysis

DAY 5 - Promoting a positive safety culture

- Introduction to Safety Culture
- Techniques for improving safety culture
- Measuring improvements in safety culture
- Integrating safety culture within the HSE Management System

Registration form on the Training Course: Advanced Process Risk Assessment & Risk Management

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