



## Advanced Process Risk Assessment & Risk Management Conference





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## Introduction

Health, safety, and environmental management systems are based on a proactive process for incident prevention as well as reactive monitoring of performance. Risk assessment must be applied to all activities impacting health and safety, production, assets, environment, and the company's reputation. This comprehensive process of risk assessment and its management is integral to the success of any safety-conscious organization.

Participants in the advanced process risk assessment and risk management conference will gain invaluable insights into the intricate world of risk assessment and management. Our comprehensive program covers every aspect, from understanding the risk assessment process to implementing effective risk management strategies. Discover the essential steps in the risk assessment process and delve into the intricacies of risk management procedures.

Whether you're seeking to enhance your skills or broaden your knowledge, our expert-led sessions and interactive workshops ensure you can confidently navigate the complexities of risk assessment and management. Take advantage of this opportunity to elevate your expertise and network with industry peers at the forefront of risk assessment and management for the ultimate risk assessment and risk management experience.

## Targeted Groups

- Management and those with responsibilities for analyzing risks and incidents.
- Production, project, process, mechanical, control, maintenance, and HSE Personnel.
- All personnel involved in implementing the Company's HSE Management System.

## Conference Objectives

By the end of this risk management workshop, participants will be able to:

- Recognize the difference between hazard, risk, and risk assessment.
- Learn how to evaluate different types of risk.
- Develop the skills of applying advanced process 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.
- Apply advanced techniques for root-cause analysis of incidents.

## Targeted Competencies

At the end of this advanced process risk assessment and risk management conference, the target audience will be able to:

- Improving the practical skills in applying advanced risk assessment techniques relevant to the process industry
- Effectively balance risk against the cost to optimize risk reduction measures.
- Motivating your people for an improved safety culture
- Appreciating the role of Quantified Risk Assessment and significant hazards
- Applying root-cause analysis to incident investigation and analysis

## Enhancing the Process of Risk Assessment and Management

Risk assessment and management are vital in safeguarding the integrity of production activities and ensuring personnel safety. This dedicated risk assessment training course aims to provide in-depth knowledge and the skillset required for assessing and managing risks effectively. Utilizing advanced process risk assessment techniques and integrating them into the risk management process, participants will gain practical experience to enhance their expertise in this area.

## Conference Content

### Unit 1: Advanced Risk Assessment Techniques: HAZOP

- Introduction to hazard 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 assessment process steps
- Review of commercial HAZOP software

### Unit 2: 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

### Unit 3: 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

## **Unit 4: Advanced Incidents Investigation Techniques**

- 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

## **Unit 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

## **Conclusion**

This advanced risk assessment course and risk management workshop are designed to enable professionals to identify potential risks and manage them adeptly. Emphasizing the risk management process and the effective implementation of risk assessment steps, participants will leave well-equipped to boost safety performance and reduce risks within their organizations.