MERCURY

Safety Technology & Risk Management Conference

26 – 30 April 2027
Johannesburg (South Africa)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
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Ref: 8177_1060137 **Date:** 26 – 30 April 2027 **Location:** Johannesburg (South Africa) **Fees:** 5300 Euro

Introduction:

As technological systems become more complex, identifying safety hazards and controlling their impact becomes increasingly challenging. Plant Managers and Engineers recognize that safety and risk management are crucial in every aspect of their plants' day-to-day operations.

In this advanced safety technology and risk management conference, these elements are vital to complying with ever-changing and demanding International and National environmental and economic standards.

Unsafe systems can lead to financial losses due to accidents and disruptions, criminal and civil prosecutions, loss of market share, environmental degradation, and tarnishing of a company's reputation.

Enhancing Plant Safety with Advanced Safety Technology:

In an age where advanced safety technology plays a pivotal role in industrial settings, it is paramount to understand its application in enhancing plant safety. This advanced safety technology and risk management conference will cover key aspects of safety technologies and how they can mitigate risks while sustaining productivity.

Targeted Groups:

- Operations and Process Professionals.
- Reliability and Safety Professionals.
- Other professionals are involved in process improvement.

Conference Objectives:

By the end of this advanced safety technology and risk management conference, participants will be able to:

- Apply safety technologies for hazard identification and risk assessment in processes and machinery.
- Grasp the concept of reliability and employ failure-tracing methods effectively.
- Gain a practical understanding of quantitative risk assessment techniques necessary for meticulous record-keeping
- Advise management on the most effective safety control technology based on thorough risk evaluation.
- Furnish the development of a safe system of work.
- Acquaint themselves with International Standards relevant to Reliability and Machinery Safety.
- Cultivate a proactive approach to hazard analysis within themselves.

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Targeted Competencies:

By the end of this advanced safety technology and risk management conference, participants competencies will:

- Deep understanding of safety, risk, and continuity of operations.
- Skills development for effective people management.
- Mastery of techniques that enhance plant reliability.
- Proficiency in benchmarking and quality systems auditing.
- Aptitude for applying decision analysis techniques.

Conference Content:

Unit 1: Hazard Identification and Safety Control Technology:

- Why do we need safety engineering?
- Examples of major disasters.
- The safety system process.
- Hazard identification.
- Hazard control.
- Criteria for risk tolerability.
- Hazard Identification Techniques.
- Design out hazards.
- Safety standards codes, national and international.
- Safety analysis in engineering.
- Safety analysis in Chemical process.
- Safety analysis in manufacturing.

Unit 2: Risk Assessment Techniques and Safety Management:

- Best practices in safety management and integration of safety and risk management training.
- The role of safety throughout the system life cycle.
- Comprehensive hazard identification checklists.
- Risk assessments for processes, physical workspace, and work equipment.
- Task-focused risk assessment methodologies.
- Introduction to HAZOP as a risk assessment tool.

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Unit 3: Machinery and Work Equipment Safety with Health and Safety Technology:

- Identifying hazards inherent to machinery.
- Strategies for preventing machinery-related accidents.
- Case studies involving HAZOP.
- Analysis of failure modes, human factors, and software within the realm of safety technology.
- Health and safety technology principles in conducting a failure mode and effects analysis FMEA.
- Human factors safety analysis.
- Performance and human error.
- Human factors and safety analysis.

Unit 4: Exploring the Reliability Technology and Safety Integrity Levels:

- Categorizing types and root causes of failure.
- Proactive methods to prevent failure.
- Maintenance and inspection regimes tailored to enhance reliability.
- Delving into the reliability of individual components and comprehensive systems.
- Examining the reliability plus design of control and protective systems.
- Understanding High Integrity Protection Systems HIPS.
- Selecting appropriate Safety Integrity Levels SIL.

Unit 5: Consequences Analysis via Safety Technology Workshop:

- The mechanics underlying fire, explosion, and toxic releases.
- Utilization of dispersion modeling software.
- Differentiation between fire types such as flash, jet, cascading fires, and BLEVE Boiling Liquid Expanding Vapor Explosion.
- Exploring various types of explosion events.
- Techniques for risk quantification.
- The use of Event Tree Analysis ETA for overarching consequence analysis.

Conclusion:

This advanced safety technology and risk management conference will serve as an essential safety technology conference and workshop, equipping attendees with the knowledge and skills to effectively implement safety and risk management strategies within their organizations.