

Safety Technology & Risk Management

Cairo (Egypt)
23 March - 3 April 2025



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Safety Technology & Risk Management

Code: HS28 From: 23 March - 3 April 2025 City: Cairo (Egypt) Fees: 7000 Pound

Introduction

As technological systems become more complex it becomes increasingly difficult to identify safety hazards and to control their impact. Plant Managers and Engineers are becoming more aware that safety and risk touch on every aspect of the day to day running of their Plants and engineering and process systems if they are to comply with ever-changing and demanding International, and National environmental and economic values and standards.

Unsafe systems can result in monies being lost due to accidents, disruption to production, criminal and civil prosecutions, loss of market share, and the degradation of company assets and the environment

Course Objectives of Safety Technology & Risk Management

- · Apply the principles of hazard identification and assessment of risk to processes and machinery
- Understand reliability concept and use of failure tracing methods
- Demonstrate a practical understanding of a quantitative risk assessment technique and the date required for records
- · Advise management on the most effective control methods based on the evaluation of risk
- Identify the general requirement for the development of a safe system of work
- · Recognize relevant International Standards for Reliability and Machinery Safety
- Promote a proactive attitude within the individual to hazard analysis

Course Outlines of Safety Technology & Risk Management

Day 1

- · Hazard Identification
- · Why do we need safety engineering
- · Examples of major disasters
- The safety system process
- · Hazard identification
- Hazard control

Day 2

- Criteria for risk tolerability
- Hazard Identification Techniques
- · Design out hazards

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Day 3

- · Safety standards codes, national and international
- · Safety analysis in engineering
- Safety analysis in Chemical process
- · Safety analysis in manufacturing

Day 4

- Risk Assessment Techniques
- · Safety Management
- Safety in the system life cycle
- · Hazard identification check-list
- Process, workplace, work equipment risk assessment
- · Task-based risk assessment
- Introduction to HAZOP

Day 5

- · Machinery and Work Equipment Safety
- Machinery hazard identification
- · Causes and methods for machinery accident prevention
- HAZOP examples
- Failure modes, human factors, and software safety
- · Conducting a failure mode and effects analysis

Day 6

- Human factors safety analysis
- · Performance and human error
- Human factors and safety analysis

Day 7

- Reliability Technology
- Types and causes of failures
- · Methods of preventing failure
- Types of maintenance and inspection regimes

Day 8

- Reliability of components and systems
- Design and reliability of control systems
- Design and reliability of protective systems
- The concept of <code>[]HIPS[]</code>
- Safety Integrity Levels [SIL] selection

Day 9

Consequences Analysis

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- Mechanics of fire, explosion, and toxic releases
- Dispersion modeling software
- Types of fire: flash, jet, cascading fires and BLEVE
- Types of explosion

Day 10

- · Quantification of risk
- Event Tree Analysis [ETA]



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