MAESTRO CONSULTANTS

SAFETY ENGINEERING & RISK MANAGEMENT

COURSE OUTLINE 2024

Contact Us On :
Tel : +971 7 2042072 |
Email: training@maestrouae.net
Website: www.maestrouae.net

TRAINING TITLE
SAFETY ENGINEERING & RISK MANAGEMENT

VENUE
Dubai, UAE.

DURATION
5 Days

Ref No.

SS012

DATES

25 - 29 August 2024

PRICE
$5,500 per attendee including training material/handouts, morning/afternoon coffee breaks, and Lunch.

TRAINING 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 money 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.

TRAINING OBJECTIVES
The overall objective is to ensure that participants are familiar with the concept of reliability and fundamentals of risk assessments. This training course has been designed to enable delegates upon completion to be able to:

- 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 development of safe system of work
- Recognise relevant International Standards for Reliability and Machinery Safety

TRAINING AUDIENCE

- ✓ Plant Professionals
- ✓ Engineers
- ✓ Designers
- ✓ All Professionals who have a contribution to make in ensuring the safe operation of a potential high hazard workplace.

TRAINING OUTLINE

Day 1: Hazard Identification

- Introduction and Course Overview
- 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

Day 2: Risk Assessment Techniques

- Safety Management
- Safety in System Life Cycle
- Hazard Identification Check-list
- Process, Workplace, Work Equipment Risk Assessment
- Task-based Risk Assessment

- Introduction to HAZOP

Day 3: 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 Effective Analysis
- Performance and Human Error
- Human Factors and Safety Analysis

Day 4: Reliability Technology

- Types and Causes of Failures
- Methods of Preventing Failure
- Types of Maintenance and Inspection Regimes
- Reliability of Components and Systems
- Design and Reliability of Control Systems
- Design and Reliability of Protective Systems
- The Concept of 'HIPS'
- Safety Integrity Levels 'SIL' Selection

Day 5: Consequences Analysis

- Mechanics of Fire, Explosion and Toxic Releases
- Dispersion Modelling Software
- Types of Fire: Flash, Jet, Cascading Fires and BLEVE
- Types of Explosion
- Quantification of Risk
- Event Tree Analysis 'ETA'
- Course Summary
- Course Review

TRAINING CERTIFICATE

MAESTRO CONSULTANTS Certificate of Completion for delegates who attend and complete the training course.

METHODOLOGY

Our courses are highly interactive, typically taking a case study approach that we have found to be an effective method of fostering discussions and transferring knowledge. Participants will learn by active participation during the program through the use of individual exercises, questionnaires, team exercises, training videos and discussions of "real life" issues in their organizations.
The material has been designed to enable delegates to apply all of the material with immediate effect back in the workplace.