



HSE150

Safety & Loss Prevention

Course Introduction:

Modern concepts of Loss Prevention and Loss Control are based on risk management. Apart from injuries to personnel and others, uninsured losses from major accidents can be extremely high. Piper Alpha accident for example costs is more than \$8bn and 167 fatalities. In this programmed you will learn how to:

- Improve your practical skills in applying proactive and reactive concepts of loss prevention
- Gain familiarity with projects HSE plans and reviews
- Appreciate the role of accident investigation and root-cause analysis
- Appreciate the role of Quantified Risk Assessment and major hazards

This programmed is aimed at providing hands-on experience on the application of loss prevention principles relevant to a wide variety of industries. This programmed will enable attendees to identify hazards, particularly those resulting from human error, evaluating risks and targeting resources to prevent accidents through effective risk management. The programmed will also provide familiarity with the concept of Safety Case for major hazards, accidents analysis and modern risk management techniques for planning and implementing action plans.

Course Objectives:

Upon successful completion of this course, the delegates will be able to:

- Appreciate the consequences of major accidents in terms of fire, explosion, toxic releases and their costs
- Understand risk assessment techniques and hands-on experience in applying this technique to their own sphere of activities
- Analyze some principal stages in the accident chain and hazard models. This concept will be used to systematically analyze the root causes for selected accidents/incidents, which have occurred
- Provide programmed members with the experience in the application of quantified risk assessment 'QRA'
- Ensure consistent optimization of resource allocation for production, maintenance and safety, based on risk and cost-benefit analysis
- Emphasis throughout the programmed will be placed on the practical application of advanced risk management techniques to new projects and current activities

Who Should Attend?

This course is intended for project technical personnel and all personnel involved in implementing the company's HSE management system.

Course Outline:

Day 1:

Pre-Test

HSE Management Systems

- Elements of HSE Management System
- Risk Management
- Cost-benefit Analysis for optimization of protection
- Planning and Implementing action plans
- Target setting
- Prioritizing and targeting corrective and preventive measures

Day 2:

Incident Investigation

- Proactive and Reactive measurement of HSE performance
- Learning from accidents at work
- Organizational requirements for accident investigation
- Active error, latent failures and pre-conditions
- Root cause analysis
- Human factors and accidents causation
- Incident investigation framework

Day 3:

Advanced Incident Analysis Techniques

- Root cause analysis techniques
- Fault Tree Analysis 'FTA'
- Event & Causal Factors Analysis 'E&CFA'
- Practical applications for modern accident analysis techniques

- Piper Alpha

Day 4:

Introduction to Quantified Risk Assessment 'QRA'

- Elements of Quantified Risk Assessment
- Analysis of the consequences
- Commercial Software for Fire, Explosion and toxic release modeling
- Review of recent QRA Studies carried out by the Consultant
- Decision Trees and Event Tree Analysis
- Concept of the Safety Case for Offshore Installations
- Applications for Safety Cases

Day 5:

Projects HSE Plans and Reviews

- Elements of Project HSE Plan
- Stages of Project Development
- Project HSE Reviews 'PHSER'
- The role of HAZOP and QRA in project development
- Personal action plans, programmed review and the way ahead

Post Test

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods

- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Fees:

To be advised as per the course location. This rate includes participant's manual, Hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session

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