

Training Title

RISK ASSESSMENT & RISK MANAGEMENT FOR OIL & GAS

Training Duration

5 Days

Training Duration & Date

REF HS092	Risk Assessment & Risk Management for Oil & Gas	5	22 – 26 Dec. 2025	\$6,500	Barcelona, Spain
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In any of the 4 or 5-Star hotels. The exact venue will be intimated soon.

Training Fees

- 6,500 US\$ per participant for Public Training includes Materials/Handouts, Lunch, Tea/Coffee Refreshments.

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

‘Traditional’ risk assessment programmes exist to identify hazards arising from work activities to ensure suitable risk control measures are in place. However, incidents continue to happen, either as a result of inadequate risk assessments or failures in the necessary risk control measures. Risk management involves the preparation of action plans, implementing and measuring performance. This can be proactive, based on risk assessments, active, based on safety audits and site inspection, and reactive based on incident investigation and analysis.

This 5-day programme presents the cutting edge of advanced risk assessment and risk management techniques that are based on latest International Standards and best industry practice. This training session is designed to provide delegates with the knowledge and skills necessary to design, implement and monitor effective risk assessment and risk management systems for their organisation.

WHO SHOULD ATTEND?

- Personnel involved in carrying out risk assessment and accident prevention
- Personnel involved in implementing the Company’s HSE Management System
- Professionals wishing to widen their understanding of undertaking and managing process risks within the organization’s HSE Management System

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- The Workshop is also designed for other professionals who need to keep up-to-date with latest trends in risk management

OBJECTIVES

The delegates will learn how:

- Selection of appropriate risk assessment techniques, including process/work place based versus the task-based approach
- Monitor and review the effectiveness of an organisation's risk assessment procedures relevant to process hazards
- Plan improvements to your organisation's risk assessment procedure on a rational basis
- Implement risk control strategies and recommend long term risk controls based on cost-benefit analysis
- Develop an audit plan for HSE Management System
- Develop procedures for incident investigation and analysis
- Design a feedback system to ensure that the organisation continues to review and learn from experience

TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course. Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE OUTLINE

DAY 1 - Introduction to Risk Assessment

- Programme introduction: delegate and tutor introductions; programme objectives
- Introduction to HSE Management Systems
- Integrating risk assessment within Risk Management

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- Semi-quantitative risk assessment techniques - machinery based
- The task-based approach to risk assessment
- Syndicate exercise: Working in small groups

Hazard and Operability Studies 'HAZOP'

- Introduction to hazards identification and analysis techniques
- Techniques for hazard identification and analysis - HAZOP
- Syndicate exercise - application of HAZOP to relevant processes
- Planning and implementing within risk management system

DAY 2

Analysis of the consequences

- Introduction into reliability technology
- Failure Modes and Effects Analysis 'FMEA'
- Failures of Permit-to-work systems: video presentation on Piper Alpha
- Analysis of the consequences - mechanics of fire, explosion and toxic releases
- Role of Fault Tree Analysis to identify how accidents can happen

Human Factors and Reliability

- Introduction to human factors and human error
- Hierarchical task analysis 'HTA'
- Task-based HAZOP: Application to critical activities onshore and offshore
- Working in small groups on task-based HAZOPs
- Integrating human factor within HSE management system

DAY 3

Quantified Risk Assessment 'QRA'

- Introduction to Quantified Risk Assessment 'QRA'
- The role of Event Tree Analysis in scenario development
- The role of Fault Tree Analysis for multi-causation analysis
- Applications for ETA and FTA
- Case Study: Working in small groups on accident analysis
- Preparation of action plans, planning and implementing

Modern HSE Management Systems

- Introduction to HSE Management Systems

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- Elements, sub-elements and expectations of HSE-MS
- The role of risk management within HSE-MS
- The role of HSE Audits
- Procedures for planning and implementing of action plans

DAY 4

Modern Incidents Investigation Techniques

- Human contribution to accidents
- The role of root cause Analysis in identifying management system failures
- Accident investigation techniques I: Fault Tree Analysis 'FTA'
- Working in small groups on the use of FTA
- Preparation of action plans
- Incident investigation techniques II: Events & Causal Factors Analysis 'E&CFA'
- Group exercise on investigating a multiple-fatalities accident involving offshore drilling rig

Major Hazards Control

- Control of Major Accident Hazards Codes of Practice
- The HSE - Safety Case Concept
- Elements of emergency planning
- Integrating HSE within major projects plans
- Elements of Projects HSE Plans
- Project HSE Reviews 'PHSER'

DAY 5

Safety

- Introduction into the causation of machinery accidents
- Machinery hazards identification
- International machinery safety standards
- Machinery risk assessment
- Design and selection of safeguards and safety devices

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

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NOTE:

**Pre & Post Tests will be conducted Case Studies, Group Exercises, Group Discussions,
Last Day Review & Assessments will be carried out.**

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**P.O BOX 45304
ABU DHABI, U.A.E**

**T +971 2 6264455
F +971 2 6275344**

www.definettraining.com