ICTD
المركز العالمي للتدريب والتطوير
International Centre For Training & Development

OIL & GAS
OPERATIONAL SAFETY

Course Introduction:

This program is based on NEBOSH International Technical Oil and Gas Operational Safety that is designed to provide a sound breadth of underpinning knowledge that enables the participants to manage oil and gas operational risks effectively.

The importance of effective health and safety training in the oil and gas industry is highlighted by extensively reported examples of major process safety incidents including the 2010 Deepwater Horizon oil rig explosion in the Gulf of Mexico, the Bunce field oil storage depot explosion (2005), the 1988 Piper Alpha oil platform explosion (both occurring in the UK) and the BP Texas Refinery explosion (USA) in 2005. Topics covered in this program include:

- Modern HSE Management Systems
- Up-stream and down-stream oil and gas operations and equipment
- Process safety management (PSM)
- Oil and gas hazards identification and analysis
- Mechanics of fire, explosion and toxic releases

Course Objectives:

- Explain the purpose of and procedures for investigating incidents and how the lessons learnt can be used to improve health and safety in the oil and gas industries
- Explain the hazards inherent in oil and gas arising from the extraction, storage, and processing of raw materials and products
- Outline the risk management techniques used in the oil and gas industries
- Explain the purpose and content of an organization's documented evidence to provide a convincing and valid argument that a system is adequately safe in the oil and gas industries

Who Should Attend?

- All supervisors and line management who have assigned responsibilities within the organization's HSE management system
- Safety Representatives
- Production and process engineers
- Maintenance personnel
- Newly qualified health & safety advisors
- HSE personnel
- All personnel involved in planning and implementing the organization's HSE management system

Course Outline:

DAY 1

- Health, Safety and Environmental Management in Context
- Learning from incidents
- Hazards inherent in oil and gas
- Risk management techniques used in the oil and gas industries
- Safe systems of work
- Hydrocarbon process safety I
- Process Safety Management (PSM)

DAY 2

- Hydrocarbon Process Safety
- Mechanics of failure
- Safety critical equipment control
- Safe containment of hydrocarbons
- Plant operation and maintenance
- Start-up and shut down
- Fire hazards, risks and controls
- Furnaces and boiler operations

DAY 3

- Risk assessment techniques
- Framework for risk assessment
- Hazard and Operability Study 'HAZOP'
- Failure Modes and Effects Analysis 'FMEA'
- The Bow-tie model
- Safety Integrity Level 'SIL' selection
- Hazardous Area Classification

DAY 4

- Fire Protection and Emergency Response
- Fire and explosion in the oil and gas industries
- Types of fire
- Types of explosion
- Fire and explosion risk analysis
- Fire and explosion protective systems
- Emergency Plans and response

DAY 5

- Logistics and Transport Operations Safety
- Maritime transport
- Land transport
- Diving activities
- Cargo handling and lifting operations

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 Questionaires
- Group Work
- Discussion
- Presentation

Course Fees:

To be advice as per course location, this rate includes participant's manual, and-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