

# Oil & Gas Operational Safety

## INTRODUCTION

- Flammable, toxic and explosive are just some of the inherent hazards of oil and gas. Operational Safety is of prime importance which means that there has to be correct procedures in place and personnel that are competent in using these procedures to ensure that no incidents occur. This training course covers oil & gas operations and is designed to provide underpinning knowledge that enables personnel to manage oil and gas operational risks effectively.

Participants on the Oil & Gas Operational Safety training course will develop the following competencies:

- Familiarity with health and safety management system
- Process Safety
- Hydrocarbon process hazards identification and control
- Fire protection and emergency response
- Transport operational safety

## PROGRAMME OBJECTIVES

Participants attending the Oil & Gas Operational Safety training course should be able to:

- Categorise the hazards inherent in oil and gas arising from the 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 organisation's documented evidence to provide a convincing and valid argument that a system is adequately safe
- Recognise 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
- Illustrate Process Safety
- Formulate Emergency Plans

## WHO SHOULD ATTEND?

Oil & Gas Operational Safety training course is suitable for:

- Managers
- Team Leaders
- Supervisors
- Production and Process Engineers
- Maintenance Personnel
- Personnel interested in developing skills in this area
- All personnel involved in planning and implementing the organisation's HSE management system

## TRAINING METHODOLOGY

- Participants on Oil & Gas Operational Safety training course will learn by active participation through the use of exercises, case studies and open discussion forums. Videos shown will encourage further discussions and delegates are encouraged to bring forth experiences and problems from their own organisations.

## PROGRAMME SUMMARY

- This Oil & Gas Operational Safety training course covers essential skills in understanding oil and gas operations and equipment. Through process risk management, participant will be able to apply risk assessment techniques for hazards identification and control. This will help organisations to demonstrate that all hydrocarbon risks are understood and are adequately controlled.

## PROGRAM OUTLINE

### Health, Safety and Environmental Management

- Process Safety Management (PSM)
- Learning from incidents
- Hazards inherent in oil and gas
- Risk management techniques used in the oil and gas industries
- Work permit systems
- Safety Reports

### Process Safety

- Mechanics of failure
- Safe containment of hydrocarbons
- Plant operation and maintenance
- Start-up and shut down

## Risk Assessment Techniques

- Framework for risk assessment
- Hazard and Operability Study 'HAZOP'
- The Bow-tie model
- Inherent Safer design
- Safety Integrity Level 'SIL'
- Hazardous Area Classification

## Fires, Explosions 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

## Transport Operations Safety

- Diving activities
- Maritime transport
- Land transport