

# € TRAINING

Safety Hazards Associated for the Oil and  
Gas Industry





# Safety Hazards Associated for the Oil and Gas Industry

## Introduction:

This training program is designed to educate workers about the various risks they may encounter during their work, including but not limited to, exposure to hazardous chemicals, machinery malfunctions, and environmental dangers. By equipping employees with this knowledge and training, companies can promote a culture of safety and ensure the well-being of their workforce and the surrounding environment.

## Program Objectives:

At the end of this program, participants will be able to:

- Ensure safety assurance and assessment throughout design and operations.
- Conduct hazard classification and assessments effectively.
- Utilize accident modeling, risk assessment, and management techniques.
- Implement diverse safety measures in both design and process operations.
- Analyze case studies from the offshore and petroleum industry to illustrate key concepts.
- Address environmental issues and management strategies associated with drilling and oil exploration.

## Target Audience

- Operations and Maintenance Personnel .
- Supervisors, Engineers, Team Leaders.
- HSE personnel.
- Departmental safety officers.
- Safety representatives.
- Newly appointed Health and Safety Advisers.

## Program outlines

Unit 1:

Introduction & Overview:

- Perspective on Crisis & Emergency.
- Management, understanding the terms.
- Hierarchy of Control
- Leadership and commitment.
- HSE policy and strategic objectives.
- Legislation and regulation.
- Organization, responsibilities, and resources.

## Unit 2:

### Safety Assurance and Assessment in Design and Operations:

- Introduction to HSE Safety Assurance.
- Safety in Design and Operations.
- Organizing for Safety Hazard Classification and Assessment.
- Hazard Evaluation and Control - HAZOP.
- Conduct Hazard Classification and Assessments.

## Unit 3:

### Accident Modelling, Risk Assessment & Management:

- Dose Assessment, Safety Regulations.
- Toxic Releases- Models and Methods.
- Chemical Risk Analysis - Chemical Exposure Index CEI.
- Case Studies in Oil Industries, Quantitative Risk Assessment.
- Fire and Explosion Models -Flammability Diagrams.
- Exposure Models - Fire and Explosion: Prevention Methods.
- Event Tree and Fault Tree Analyses.

## Unit 4:

### Environmental Issues and Management:

- Environmental Impact and Management.
- Impact of Oil and Gas Industry in Marine Environment.
- Oil Hydrocarbons in Marine Environment.
- Chemical Disposal of Offshore Industry and Environmental Management.
- Dispersion Models and Atmospheric Pollution.
- Hazard Assessment.

## Unit 5:

### Safety Measures in Design and Operation:

- Safety Measure in Oil and Gas Industry.
- Safety Methods in Design and Operation.
- Process Safety Management.
- Software Used In HSE.
- Review and Wrap-Up.