



**Scandinavian  
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Training Center

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# Course: Safety in the Oil and gas field operations

Code	City	hotel	Start	End	price	Language - Hours
167	Riyadh	Hotel Meeting Room	2025-10-05	2025-10-09	11450 SR	En - 25

## Introduction

Modern concepts of Oil and gas field Safety Technology adopt the risk-based approach to selecting the most appropriate design measures in order to reduce risks to a level that is as low as reasonably practicable. This programmed Safety in the Oil and gas field operations is familiarizing participants with the most relevant up-to-date and International Standards in the field of Safety Technology in oil and gasfield. This course focuses on machinery and work equipment safety in oil and gasfield, reliability technology, protective systems and engineering noise/vibration control.

## Who should attend?

This course is aimed at all Technical Personnel involved in projects, design, maintenance, instrumentation and safety and controlling which looking to built background about oil and gasfield operations keys.

## Impact on Individuals:

Attendees will be able to apply skills learnt from this training at a practical level to implement the oil and gas Company's System in relation to new projects and existing hardware.

## Overall Programme Aims:

- To update participants on modern concepts of machinery and work equipment



- safety Standards and Directives in the oil and gasfield and petroleum jobs
- To provide participants with a clear understanding of machinery and work equipment risk assessment techniques and the oil and gas sciences controlling
  - To assist project engineers in selecting a criteria for integrating health and safety specifications for machinery and work equipment
  - To ensure consistent optimization of resource allocation for production, maintenance and safety, based on risk and cost-benefit analysis.
  - looking in depth about oil and gas companies management
  - To provide participants with an understanding of oil and gasfield and petroleum jobs Control principles and options.
  - Emphasis throughout the course will be placed on the practical application of reliability and risk assessment techniques to new projects and existing machinery/systems.

## **Programme Contents:**

- The concept of advanced operation in oil and gasfield management
- Causes of machinery accidents and methods of prevention ( oil and gasfield specialized )
- Machinery safety harmonized transposed standards ( oil and gasfield specialized )
- Fluid power machinery safety ( oil and gasfield specialized )
- Machinery and work equipment risk assessment( oil and gasfield specialized )
- Introduction to reliability technology ( oil and gasfield specialized )
- Components and systems reliability calculation ( oil and gasfield specialized )
- Instrumentation reliability: control and protective systems( oil and gasfield specialized )
- Programmable Electronic Systems in safety-related functions ( oil and gasfield specialized )
- Hazardous Areas Classification in accordance ( oil and gasfield specialized )
- oil and gas filed safety standard and international rules .international standard organization )
- Engineering noise and vibration control ( oil and gasfield specialized )



## Course Outline

### **DAY 1- oil and gasfield and petroleum Machinery Safety**

- Causes and methods of preventing machinery accident
- Duties of designers/suppliers of machinery oil and gasfield and petroleum
- Marking and Declarations of Conformity/Incorporation oil and gasfield and petroleum
- The Machinery Safety Harmonised Standards oil and gasfield and petroleum
- Types of Machinery Safeguards and Safety Devices oil and gasfield and petroleum

### **DAY 2- Oil and gasfield And Petroleum Machinery Risk Assessment**

- Fluid power machinery: hydraulic and pneumatic systems
- Components of oil and gas hydraulic and pneumatic systems
- Hydraulic and pneumatic circuit diagrams
- Machinery/work oil and gas equipment hazards identification
- Machinery risk assessment
- Case studies and group exercises on machinery risk assessment

### **DAY 3- Oil and gasfield and petroleum Reliability Technology**

- Introduction into Reliability Technology
- Reliability calculation
- Types of failures: the bathtub curve oil and gasfield and petroleum
- Types of inspection and maintenance oil and gasfield and petroleum
- Distribution and reliability parameters oil and gasfield and petroleum
- Bays theorem and systems reliability calculations oil and gasfield and petroleum

### **DAY 4- Oil and gasfield and petroleum Protective Systems Design and Reliability**



- Elements of control and protective Oil and gas systems
- Reliability of control oil and gas systems
- The concept of fractional dead time and protective systems
- High Integrity Protective Systems 'HIPS'
- Hazardous Area Classification: the EU ATEX Directive
- Active fire/explosion protection systems

## **DAY 5- Oil and gasfield and petroleum Noise and Vibration Control**

- Noise and occupational deafness oil and gasfield and petroleum
- Sources and pathways of noise oil and gasfield and petroleum
- Engineering noise control options oil and gasfield and petroleum
- Vibration isolation oil and gasfield and petroleum
- Vibration damping oil and gasfield and petroleum
- Sound absorption oil and gasfield and petroleum



The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

### **Program Timings:**

- 9:00 AM to 2:00 PM

### **The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.