



**SCANDINAVIAN ACADEMY**  
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# Course: Safety in the Oil and gas field operations

Code	City	hotel	Start	End	price	Hours
167	Madrid (Spain)	Hotel Meeting Room	2025-01-20	2025-01-24	5950 €	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 gass systems
- Reliability of control oil and gass 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 and Development employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:**

• **Theoretical Lectures:**

- We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.

• **Scientific Assessment:**

- We evaluate trainees skills before and after the course to ensure their progress.

• **Brainstorming and Interaction:**

- We encourage active participation through brainstorming sessions and applying concepts through role play.

• **Practical Cases:**

- We provide practical cases that align with the scientific content and the participants specific needs.

• **Examinations:**

- Tests are conducted at the end of the program to assess knowledge retention.

• **Educational Materials:**

- We provide both printed and digital scientific and practical materials to participants.

• **Attendance and Final Result Reports:**

- We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.

• **Professionals and Experts:**

- The programs scientific content is prepared by the best professors and trainers in various fields.

• **Professional Completion Certificate:**

- Participants receive a professional completion certificate issued by the Scandinavian Academy for Training and Development in the Kingdom of Sweden, with the option for international authentication.

• **Program Timings:**

- Training programs are held from 10:00 AM to 2:00 PM and include coffee break sessions during lectures.