Training - HSE Superintendent

HSESI-EN-P | **Face-to-face only** | **61 days**

This certifying HSE course provides participants with a greater and deeper knowledge in safety in operations, safety engineering, crisis management, environment, HSE management and leadership. It also develops and consolidates their competencies in field operations while developing their team management and communication capabilities

Level

Skilled

Public

Professionals with a significant experience in Oil & Gas surface production and HSE, called on to hold the position of HSE Superintendent

Objectives

Attendees will be able to implement the following skills:

- Know state-of-the-art Oil & Gas production techniques and equipment technology
- Understand all details of HSE issues linked to production, as well as to construction and maintenance works
- Describe HSE management rules and individual responsibilities
- Contribute to building a HSE culture in their organization
- Participate efficiently to crisis management team
- Use efficient work methods and communication skills
- Carry out projects and actions ensuring the highest standards in safety and respect for the environment

Pedagogical & technical resources

- Numerous applications and illustrations
- Several teamwork sessions
- Practical sessions on firefighting and oil spill response
- Development of soft skills and group management techniques

Assessment of achievements

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prerequisites

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Program

INTRODUCTION 1 day

Welcome and program overview. Entry test. Units. Dimensions.

DOWNHOLE PRODUCTION - WELL PERFORMANCE - PRODUCTION FUNDAMENTALS 5 days

Fundamentals of reservoir engineering. Well testing. Fundamentals of drilling, completion and well servicing. Artificial lift (pumping, gas lift…) and well performance. Effluent behavior. Fundamentals of thermodynamics. Specifications. HSE management.

OIL, WATER & GAS PROCESSING 5 days

Oil processing: required specifications, stabilization, dehydration, desalting. Production and injection water treatment: water quality requirements and associated treatments. Gas processing: required specifications, dehydration, hydrates, consequences and treatments; Natural Gas Liquids recovery.

OFFSHORE DEVELOPMENTS, FLOW ASSURANCE 2 days

Offshore developments challenges, technology, techniques and production constraints. Fixed and floating production structures. Prevention of deposits in flowlines. Monitoring of multi-phase flows in flowlines.

TERMINAL, FSO & FPSO 1 day

Overview of oil terminals. FSO & FPSO technologies. Metering of oil quantities.

BEHAVIORAL MANAGEMENT 5 days

Teamwork management, written and oral communication. Active listening and communication tools. Team cohesion and stress management. Problems analysis and investigation: tools and behaviors. How to better analyze and know oneself.

INSTRUMENTATION & PROCESS CONTROL - ELECTRICITY 5 days

Instrumentation and process control: functional blocks, symbolization; measurements, sensors, security equipment; control equipment, controllers and control loops; Distributed Control System (DCS): architecture, connections; Safety Instrumented Systems (SIS): HIPS, ESD, EDP, FGS. Electricity: generation (turbines, alternators, monitoring, troubleshooting); distribution (HT-BT networks, stability, cabinets, batteries, isolation, protections).

ROTATING MACHINERY 5 days

Pumps: centrifugal pumps (types, technology, auxiliaries, performances); volumetric pumps. Compressors: centrifugal compressors: rotor, stator, bearings, shafts, seals balance; reciprocating compressors (frame, cylinders, pistons and rings, bearings, lubrication, cooling). Gas turbines: compression, combustion, expansion, performances, technology. HSE concerns.

CORROSION, INSPECTION & INTEGRITY 2 days

Corrosion mechanisms. Types of corrosions in the Oil & Gas industry. Corrosion prevention and monitoring, fundamentals of inspection.

HSE IN SURFACE PRODUCTION OPERATIONS 5 days

Main hazards: inflammability, toxicity, pressure, temperature. Risk assessment tools: Job Safety Analysis (JSA). Risks in process operations: Static equipment, rotating machines, electricity, utilities. Safe isolation and start-up: degassing-inerting, mechanical lock-out, PPE. Permit to work, responsibilities, processes, risk types. Organizational framework, human factors: HSE management system. SIMultaneous OPerationS (SIMOPS), management of change, downgraded situations. Reporting and cause tree analysis.

SAFETY ENGINEERING 5 days

Safety engineering throughout the life of a project and during operations. Risk assessment, concepts of loss of containment, barriers, flammability. HAZID studies: methodology, Oil & Gas facilities, risks, real case study. HAZOP studies: matrix, group management, exercise. Major hazards: scenarios representation, Bowtie diagram, risk matrices and ALARP principle. Plot plan

review: safety engineering approach to layout, exercise on an offshore site. Prevention of hydrocarbon release: integrity and quality control, FMEA studies, Process Safety Management. Prevention of ignition: hazardous areas classification, electricity, overpressure, HIPS, PSD, ESD.

HSE MANAGEMENT — 5 days

Overview of HSE management systems, human factors, error analysis and improvement. Fundamentals of management systems, HSE leadership, communication, commitment. Risks, identification, evaluation, management, continuous improvement. Management commitment and leadership, safety culture, HSE competency assurance, training. Strategies and HSE objectives: main indicators, legal requirements and standards. Risk management and stakeholders, operations conception and integrity. HSE planning: HSE management in projects, HSE and environmental management plans. Tools for risk assessment and execution of activities, health, ergonomics, logistics. Audits, continuous improvement: monitoring, reporting, public reports, audits, management system review.

CRISIS MANAGEMENT — 5 days

Emergency response plan: response levels, crisis management teams. Rescue planning and resources, role and responsibilities. Training and information, emergency situations responses exercises. Fire protection and detection systems, strategies and typical scenarios. Firefighting equipment, passive, active, fixed, mobile.

ENVIRONMENTAL MANAGEMENT — 5 days

Fundamentals of environmental management. Environmental, social and health impact assessment. Environmental management plan: concepts, controls and mitigation measures. Monitoring and reporting: indicators, performances, trends. Waste management plan: strategy, type of waste, collection, transport, storage, treatments. Stake holders engagement: identification, commitment, information. Environment management system: referential, certification. Energy management: efficiency, improvements.

FINAL ASSESSMENT — 2 days

Sessions

Pau - From 2025/09/16 to 2025/12/10 — **45840 €/HT**

Pau - From 2026/09/15 to 2026/12/08 — **45840 €/HT**

Pau - From 2027/09/14 to 2027/12/08 — **46890 €/HT**

To French entities : IFP Training is referenced to DataDock ; you may contact your OPCO about potential funding.
Please contact our disabled persons referent to check the accessibility of this training program : referent.handicap@ifptraining.com