

Training - Production Supervisor



PRODSUP-EN-P



Face-to-face only



45 days

This course provides the required skills and comprehensive knowledge to hold the position of Production Supervisor and ensure safe and efficient operations in upstream Oil & Gas facilities

Level

Skilled

Public

Current or future production supervisors in Oil & Gas production, transport or storage facilities

Objectives

Attendees will be able to implement the following skills:

- Explain fundamental concepts underlying oil, water and gas processing
- Grasp technical details and operating issues of completion and artificial lift
- Detail typical effluent processing techniques and impact of various operating parameters
- Describe technology and operation of static equipment and rotating machinery used in production facilities
- Identify HSE risks linked to operations, constraints and maintenance activities
- Analyze Oil & Gas processing operations using DCS, suggest and implement adapted solutions
- Detect and react to abnormal conditions in a structured manner by implementing troubleshooting best practices, using DCS tools readily available

Pedagogical & technical resources

- Highly interactive training by experienced lecturers
- Numerous examples taken from the industry and case studies derived from actual situations
- Analysis and troubleshooting of actual production operations problems using a dynamic simulator

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

Responsible

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

FUNDAMENTALS

5 days

Fundamentals of chemistry: atoms, molecules, atomic weight, molecular weight.

Hydrocarbons types and main characteristics.

Applied physics: force, work and energy, temperature, thermal energy and heat transfer, pressure, hydrostatics, hydrodynamics and friction losses.

Well effluent: composition, types and characterization parameters.

Liquid-vapor equilibrium of pure components and mixtures.

Well effluents behavior. Need for effluents field processing. Specifications.

DOWNHOLE PRODUCTION

5 days

Fundamentals of reservoir engineering.

Information on drilling techniques, completion techniques and equipment. Wellhead equipment.

Fundamentals of well performance.

Artificial lift by Gas Lift (GL), Electrical Submersible Pumps (ESP), Sucker Rod Pumps (SRP), Progressing Cavity Pumps (PCP).

Operating principle, selection criteria, operations, troubleshooting.

EFFLUENT PROCESSING

10 days

Oil treatment:

- Stabilization (degassing): principle, process parameters, foaming problems.
- Dehydration (water removal): principle, process parameters, emulsion problems.
- Sweetening (H₂S removal): different techniques, process parameters.

Production and injection water treatment.

Gas treatment:

- Gas dehydration and hydrate formation inhibition.
- Gas sweetening.
- NGL extraction/recovery.
- Fundamentals of LNG.

Oil & Gas metering.

Terminals, FSO & FPSO, offshore development.

Fundamentals of process troubleshooting.

STATIC EQUIPMENT

5 days

Piping and valves. Metallurgy and corrosion.

Storage equipment.

Thermal equipment.

Instrumentation, process control. Distributed Control System (DCS). Electricity.

Safety System: HIPS, ESD, EDP, F&G, USS.

ROTATING MACHINERY

5 days

Pumps: centrifugal and positive displacement.

Compressors: centrifugal and reciprocating.

Gas turbines.

CONTROL ROOM OPERATION & SURFACE PRODUCTION TROUBLESHOOTING

10 days

Troubleshooting methodology:

- Troubleshooting flowchart.
- Recognize a trouble when occurring.
- Methodological approach to identify causes and remedial options. Action plan.
- Implement operational/design modification.
- Troubleshooting toolbox.

Case study. Feedbacks from industry.

Troubleshooting in control room operations (on dynamic simulator):

- ▼ Use of DCS tools (trends, historical, alarm summary...) to anticipate deviations, identify and react to common production operations problems.
- Surface production units operation and troubleshooting: wells and production lines. Rotating machines. Oil & Gas treatment.

Production facilities start-up and shutdown.

Troubleshooting mini-project on real case studies.

HSE

5 days

Main HSE risks.

Hazards for personnel.

HSE in production operations.

HSE in construction and maintenance works.

Risks inherent to SIMultaneous OPerationS (SIMOPS).

HSE management. Responsibilities.

Risk analysis. Safety engineering concepts.

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