Training - Subsea Pipelines

SPIPE-EN-P | Face-to-face only | 4 days

This course provides an in-depth technical knowledge of Oil & Gas subsea pipelines

Level
Skilled

Public
Engineers and technicians involved in the design, construction or operation of Oil & Gas subsea pipelines and risers

Objectives
Attendees will be able to implement the following skills:

- Understand the fundamental concepts for designing subsea pipelines
- Comprehend the construction methods and laying techniques, including subsea tie-in and shore approach
- Manage pipeline integrity, inspection and repairs

Pedagogical & technical resources

- Lectures carry numerous examples from ongoing projects
- Trainers are specialized engineers, currently involved in deep-offshore projects

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
In order to be able to follow this training, trainees are asked to fulfill at least one of the criteria below:
• either a proven experience in the design or the conception of pipelines of at least 1 year,
• or to be evolving towards a conception position or subsea pipeline design.

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

PIPELINE OPERATION: INTRODUCTION & MAIN CONSTRAINTS — 0.5 day

Definitions. Architecture of Oil & Gas production facilities.
Pipeline concepts.
Riser concepts.
Fabrication of carbon steel line pipe.
Constraints associated to subsea environment.
Flow regimes and instabilities.

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Maintaining the flow in pipelines: management of deposits.
Preservation during shutdown, restart.
Production monitoring and control from surface.
Impact of operational constraints on architecture and design.

DESIGN OF RIGID PIPELINES & RISERS — 0.5 day

Overview of pipeline design phases.
Survey techniques and route selection.
Thermal performance design.
Mechanical design.
Internal & external corrosion.
Materials.
Stability.
Spans.
Expansion and buckling.
Risers design specificities.
Limit state design.

FLEXIBLE PIPELINES DESIGN — 0.25 day

Specificities of flexible pipeline design.

OFFSHORE PIPELINE CONSTRUCTION — 0.5 day

Pipe lay methods (S, J, reel, tow).
Initiation/abandonment, installation of in-line structures.
Pipe lay vessels & equipment.
Welding and NDT.
Comparison of installation methods.

SHORE APPROACH CONSTRUCTION — 0.25 day

Shore approach construction and horizontal drilling.

TRENCHING & PROTECTION — 0.25 day

Requirements for pipeline protection.
Soil classification.
Overview of protection methods.

SUBSEA TIE-IN METHODS — 0.25 day

Conventional tie-ins including hyperbaric welding.
Deep-water tie-ins.
Thermal insulation of tie-ins.

PRECOMMISSIONING & PIGGING — 0.25 day

Introduction to pipeline pigging.
Pipeline precommissioning.
Operational pigging.
Intelligent pigging.

PIPELINE INTEGRITY — 0.75 day

Pipeline failures.
Management of integrity.
Inspection and maintenance.
Assessment of pipelines with defects. Requalification.
Repair.

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WORKSHOP **0.5 day**

Worked example covering the main topics of the training.

Sessions

Rueil-Malmaison - From 09/21/2026 to 09/24/2026 **3270 €/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

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