Training - Liquid Transport by Pipeline

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

This training provides a deeper knowledge on flow purpose through pipelines, pumps and pumping stations operation, pipe operation optimization and management

Level
Skilled

Public
Technicians and Engineers involved in pipeline operation and/or management

Objectives
Attendees will be able to implement the following skills:

- List possible phenomena that can affect a pipeline
- Associating the phenomenon with the measures to be taken to counter it
- List the parameters concerning the centrifugal pumps ensuring their adaptation to the stresses of the circuit
- List key points for pipeline optimization, maintenance, and safety

Pedagogical & technical resources
Case studies based on industrial situations

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

PIPELINE OPERATION — 0.5 day

Flow characteristics: flowrate, velocity, mass flow and volume flow, link between pressure and height, product viscosity, friction losses.
Piezometric line, practical use.
Circuit resistance.

CENTRIFUGAL PUMPS — 0.5 day

Technology. Various parts, seals, lubrication.
Survey - Potential damages and incidents.

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Pump types used with pipeline transfer. Variable speed drive.
Pump operation. Performance curves: head-flowrate, power, NPSH, efficiency.
Performances vs rotation speed and impeller diameter change.
Operation limits: minimum and maximum flows.

PIPELINE OPERATION — 1.5 days

Operating point, flow control.
Pump arrangements selection and optimization according to the pipeline characteristics.
Start-up, shutdown, incidents.
Liquid hammer effects.

OPERATION OF EQUIPMENT OTHER THAN PUMPS — 0.5 day

Pipeline fittings: valves types, check valves, pigs, pig stations.
Instrumentation and metering: hydrometers, flowmeters, colorimeters, turbines, metering stations.
Drag reducers: different types, use, properties, implementation.

PIPELINE MAINTENANCE — 0.5 day

Key points.

CONTAMINATION - CONTAMINANTS TREATMENT — 0.5 day

Products segregation. Contaminants management. Product quality issues, customer specifications issues.

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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