

Training - Metering and Allocation



METER-EN-P



Face-to-face only



5 days

This course provides a comprehensive knowledge of metering equipment and applications in the Oil & Gas industry

Level

Skilled

Public

Operational staff of Oil & Gas field treatment plants and terminals, instrumentation specialists, petroleum architects, project engineers, reservoir engineers, well performance specialists, completion specialists, personnel from engineering companies and all professionals interested in metering methods and equipment used in the petroleum industry

Objectives

Attendees will be able to implement the following skills:

- Review different kinds of metering and allocation methods and assess importance of accuracy
- Grasp technology and operating principles of single-phase metering equipment
- Understand standards of liquids and gases transactional metering
- Assess operation, maintenance and calibration techniques of metering installations
- Review multiphase metering advantages, technology and operating principles

Pedagogical & technical resources

- Applications and illustrations from the industry
- Site visit according to possibility

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

DIFFERENT TYPES OF METERING - IMPORTANCE OF METERING

0.5 day

Types of metering: technical, transactional, allocation, fiscal.
Importance of metering accuracy.

DATA PROCESSING

0.5 day

Technical material balances, data reconciliation, data architecture, architecture of DCS, data recording.

IMPLEMENTATION OF A METERING INSTALLATION - INFLUENCE ON PROCESS

0.5 day

Friction losses, introduction of a cold spot, intrusivity, leakage risks...

SINGLE-PHASE METERING: OPERATING PRINCIPLE & EQUIPMENT

1 day

Fluids dynamics.

Different types of single-phase meters:

- Meters based on kinetic energy (ρV^2): orifice plate meters, pitot tubes, rotameters.
- Meters based on velocity: direct meters (turbines, volumetric meters) or indirect meters (ultrasounds, electromagnetic, vortex, thermal, turbines).
- Derived meters: use of centrifugal pump characteristic curve, use of rotation speed of a positive displacement pump...
- Tracers: chemical, radioactive, inter-correlation.

TRANSACTIONAL METERING OF LIQUIDS

0.5 day

Static transactional metering or pseudo-transactional metering...

Metering bench; turbines, volumetric, ultrasounds.

Calibration of metering installations on test bench in manufacturing facilities or on site.

Operation of metering installations: maintenance, calibration.

Calculators: corrections, conversion into standard volumes.

Sampling, online analysis and lab analysis.

TRANSACTIONAL METERING OF GASES

0.5 day

Metering bench; turbines, volumetric, ultrasounds.

Calibration of metering installations on test bench in manufacturing facilities or on site.

Operation of metering installations: maintenance, calibration.

Calculators: corrections, conversion into standard volumes.

Sampling, online analysis and lab analysis.

MULTIPHASE METERING: OPERATING PRINCIPLE & EQUIPMENT

1 day

Advantages of multiphase metering.

Fluids: flow modes, composition.

Principle of multiphase measurement: gamma-metric measurement, volume measurement, passive noise analysis use of dielectric, of Venturi, of inter-correlation.

Use of optic fibers: inter-correlation, sound velocity.

Description of some equipment available for multiphase measurement: 3D, Roxar, Agar, Haimo, MPM, Weatherford.

Installation of multiphase measurement - Impact on process: fluid conditioning, intrusiveness.

Subsea and downhole multiphase meters.

Calibration at manufacturer facilities.

Operation and maintenance of multiphase meters.

ALTERNATIVES TO THE USE OF MULTIPHASE METERS

0.5 day

4D seismic. Use of natural or introduced tracers.

Estimation of the contribution of each reservoir.

Sessions

Pau - From 09/21/2026 to 09/25/2026

4730 €/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