

FPSO / FSO & OPERATION OF OIL TERMINALS

OBJECTIVES

Providing technical knowledge and operational oil terminals.

Upon completion of the course, participants know the:

- main functions of a terminal,
- technical characteristics of storage facilities on land and floating installations,
- metering and sampling techniques, calculating oil commercial volume,
- technology of main oil tanker loading facilities (jetty, loading buoy, tandem point...),
- main functions of an FPSO, FSO,
- operations: before, during and after a loading operation,
- mooring crew activities, pilotage, Port Regulations,
- HSE risks and the various constraints related to the operation of oil terminals.

COURSE CONTENT

OVERVIEW OF OIL TERMINALS

0.50 day

The functions of oil terminals: reception, oil processing, storage, export...
Different actors of an oil terminal
The crude oil treatment
Evaluation of terminal storage capacity, tanker loading planning...

ONSHORE STORAGE TANKS

0.75 day

Different types of storage tank (fixed roof, floating roof) - Selection criteria
Technology of fixed roof tank: shell, roof, bottom, foundation, retention basins, and various equipments
Technology of floating roof tank and various equipments
Fire fighting facilities: water deluge, foam, gas extinguisher...
Safety risks on storage tanks: H₂S, dangers of ignition, explosion risk, collapse, static electricity...
Incidents and equipment failures on storage tanks
The types of fire on storage tanks

FUNDAMENTALS OF LNG TERMINALS

0.25 day

Gas liquefaction means
Storage of LNG on export terminal
Maritime Transport
Re-gasification - Receiving terminal

MEASUREMENT OF OIL QUANTITIES: RECEIVED, STORED AND EXPORTED

1 day

Measurement and sampling on onshore tank (level, reference temperature scales) - Determination of amounts standard issued
Counting dynamic transactional, sampling and calibration – Calculation of standard volume and weight
Maintenance of metering unit and calibration loop and meter calibration
Presentation of oil exported commercial documents

FLOATING STORAGE FACILITIES (FSO/FPSO)

1 day

Presentation of the main functions of a FPSO
Anchoring the FPSO - FSO
Technology of floating storage tanks
Storage tanks of: crude oil, methanol ballast. Tanks atmosphere control - Inerting system
Procedures for storage tanks entry - Incidents
Safety on-board storage of FSO / FPSO

TANKERS TECHNOLOGY AND TANKER LOADING INSTALLATIONS

0.50 day

Ships transport of crude oil (tankers): different sizes of vessels, equipment related to the handling of products (cargo circuit, pump room), ballasting and deballasting, inert gas generation, tanks washing
Different mode of loading tankers: jetty, tandem, and buoy. Advantages / disadvantages
Safety Checklist (IMO)
Description of tandem loading point and loading buoy

EXPORT AND MARINE OPERATIONS

1 day

Tanker approach operations and mooring at: jetty, loading buoy, tandem point...
Tanker loading operations, tanker loading planning, preparations before loading, monitoring during the loading operations and procedures after loading
International Ship and Port Facility Security (ISPS) Code: principle, actors, responsibilities, practical difficulties
Mooring crew operations
Safety Port Regulations – Pilot activities
Commercial contracts, demurrage, commercial claims

E-540

▲ Who should attend?

Production personnel of oil terminals, managers, and technicians whose activities are related to the oil terminals: production, marine maintenance, operators, designers and manufacturers of oil installations, personnel in charge of trading, authorities...

▲ Duration

5 days

▲ Sessions in English

April 26-30, 2010
Rueil-Malmaison (Paris)

French sessions: F-540

▲ Registration

Fees: € 2,120

Contact:

exp.rueil@ifptraining.com
Fax: (+33) 1 47 52 74 27

▲ Course Coordinator

Frank BEIJER

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At request, this course may be organized for a single company, and tailored to its specific requirements.