

**Training Title**

**TANK OPERATIONS & PERFORMANCE**

**Training Duration**

**5 days**

**Training Venue and Dates**

REF#	TANK OPERATIONS & PERFORMANCE	5	15-19 November 2021	\$6,250	London, UK
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**In any of the 5 star hotels. The exact venue will be informed once finalized.**

**Training Fees**

- 6,250 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.

**Training Certificate**

**Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.**

**TRAINING INTRODUCTION & DESCRIPTION**

The effective management and operation of an oil and gas terminal is essential for a successful business. The processing, transporting and storing of crude oil and refined petroleum products, in tank farms, involves custody transfers of partner and commingled stock, significant volumes of data from various sources and blending operations complexities. In addition, as these liquids are loaded and offloaded in bulk quantities, there is a large transfer of high value that makes it imperative for tank farm operators to efficiently manage their inventory and maximize their return on investment.

This training provides an overview of the American Petroleum Institute API-650, API 620 and API 2610 specifications as well as the API 653 inspection standard. Emphasis is also given both as to safety as well as operability of tank farms and the training includes Seveso III Directive real life example reports, how they were carried out and implemented.

**TRAINING OBJECTIVES**

- In-depth knowledge of operations & management of crude oil and product terminals
- Apply proper planning and scheduling techniques in storage & transfer systems
- Command the various planning and transfer requirements for terminals
- Develop good terminal management skills

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- Apply safe practices and procedures during the various operations in terminals including oil spill contingency and emergency response plans
- Learn techniques on blending recipes for on specification products
- Understand the limitations of tank gauging methods and learn up to date new technologies and methodologies for accurate tank measurement
- Perform calculations for emissions discharges and dispersion with the aid of dedicated simulation software

#### WHO SHOULD ATTEND?

- Marine Terminal Managers, Supervisors and Superintendents
- Oil and Gas Refinery or Product Storage Facility Personnel
- Oil and Gas Operators and Engineers
- Facility Managers and Coordinators
- Process Engineers, Project Managers, Mechanical Engineers, Electrical Engineers, Instrumentation / Control Engineers, Technical Staff
- Safety and Environmental Personnel
- Transfer Supervisors
- Oil and Gas Cargo Officials

#### TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course. Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work & Practical Exercises
- 20% Videos & General Discussions

#### TOPICS DISCUSSED:

- Crude Oil and Product Properties & Handling
- Identify the Different Types of Tank, Troubleshoot, Review and Improve the Operation of a Tank Farm
- Tank Gauging Techniques, Custody Transfer and Fiscal Metering Methods
- Tank Design Standards Codes and Regulations
- Terminal Planning and Scheduling
- Management & Operations
- Identification of Different Types of Tank

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- Troubleshooting, Review and Improvement of Tank Farm Operations
- Security & Safety and other Essential Topics related to Import / Export of Oil & Liquefied Gas

## DAILY OUTLINE

### DAY 1

#### Crude Oil and Product Properties

- Review of Energy Production and Consumption
- Tank Farm Operations, Planning and Scheduling
- Physical, Chemical & Hazardous Properties of Stored Products
- Effects of Physical & Chemical Properties on Choice of Storage
- Safety and Risk
- Ignition Sources – *Electrostatic charge - NFPA 77*
- Fire Detection, Firefighting & Protection

### DAY 2

#### Tank Types, Construction & Requirements for Stored Products

- Tank Farms Differences and Purpose
- Tank Design & Engineering considerations, API Codes & Standards
  - Crude & Refined Product Storage
  - LNG, LPG, CNG Storage
- Roof Types
  - Fixed, Dome & Cone
  - Floating Roof, Internal / External
  - Suction Levels Fixed / Floating
- Estimation and Measurement of Tank Emissions and Losses

### DAY 3

#### Tank Terminal Operations

- Tank Farm Layout, Secondary Containment, Bund Walls
- Emergency Response, Handling Oil Spills
- Water Drainage Systems Network and Process Water Treatment
- Ship to Shore Transfers, Ship Loading and Discharge Process
- The of Bill of Lading, Custody Transfer and Administration
- Tank Gauging and Metering, Meter Proving, Stock Loss & Pipeline Transfer Loss
- Sampling and Quality Control – *ISO 17025*

### DAY 4

#### Terminal Management

- Comingled Stock & Unpumpables
- Terminal Inventory Control & Inter Tank Transfers

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- Changing Tanks Service
- Tank Calibration / Recalibration
- Instrumentation, Flow and Level Measurement
  - Spill and Overfill Control
  - Level Alarms / Independent Level Alarms
- Product Blending and Product Failures

## DAY 5

### **International Regulations & Requirements for Oil & Gas Marine Terminals**

- The Seveso III Directive
- ISGOTT - *Required notifications in the event of a release*
- Release Detection, Response, Reporting and Investigation
- Tank Cleaning
- Gas Freeing and Confined Entry
- API 653 Tank Inspection
  - Tank Failure Causes and Prevention
  - Settling
  - Corrosion

#### **NOTE:**

**Pre & Post Tests will be conducted**

**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

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