

# **Tank Farm Operations and Performance**

| Date                | Venues  | (\$)Fees | Book your seat |
|---------------------|---------|----------|----------------|
| 19 May -23 May 2024 | Salalah | 2900     | Register Now   |

## Introduction

Correct management and operation of an Oil & Gas terminal is essential for a successful business. The processing, transporting and storing of crude oil or refined petroleum products in tank farms, involve custody transfers of partner and commingled stock, significant volumes of data from various sources and blending 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.

### Topics discussed include:

- · Crude oil and oil product Properties & Handling
- · Regulations & Requirements
- Terminal Planning and Scheduling
- Management & Operations
- Security & Safety and other essential topics related to Export/Import Oil & Gas

# **Objectives**

The tank farm's mission is to perform its daily operations while maintaining a safe storage terminal. Attendance of this five day course will ensure the delegates of being able to:

- · Have in-depth knowledge of operations & management of oil and oil 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
- 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
- Perform calculations for emissions discharges and dispersion

# **Training Methodology**

The course includes interactive sessions with questions, discussions and problem-solving under supervision along with group exercises. It will be conducted as an interactive workshop that encourages participants to share their own experiences and apply the seminar material to real-life situations.

The course will be reinforced by a learning mix that includes, lecture style presentation, open discussion, case studies, simulations and group work.

# Organizational Impact

- Improved terminal operations
- Enhanced operational integrity
- Better operational performance
- Improved equipment usage
- Development of a better safety culture
- Improved balance sheet bottom line

# Who Should Attend?

This course is designed for anyone employed in oil refining or anyone working in an oil and or product storage facility. In addition it is intended, but not limited to professionals involved in handling, loading, or discharging of Oil & Gas cargoes. This course is specifically designed for:

- Marine Terminal Managers
- · Supervisors and Superintendents
- Oil & Gas operators
- Engineers
- Facility Managers and Coordinators
- Safety and Environmental personnel
- Transfer Supervisors

# **SEMINAR OUTLINE**

#### DAY 1

# **Crude Oil and Product Properties**

#### **Introduction and Overview**

# Evaluation of Delegates' Present Skills and Knowledge

- Stored product properties
  - Liquefied petroleum Gases
  - Gasoline
  - Jet Fuel
  - Diesel
  - · Light Fuel oil
  - · Heavy Fuel Oil
  - Bitumen
  - o Crude oil
  - · Light petroleum products
  - · Heavy petroleum products
  - Chemicals

#### Safety and Risk

- · Fire fighting & protection
  - Ignition sources Electrostatic charge
  - · Fire detection and fire fighting systems
- Risk assessments and management
- Oil Spills
- · Secondary Containment, Bund walls
- The Ship/Shore Safety Checklist

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

# **Tank Farms Differences and Purpose**

- Crude Storage
- · Refined product storage
- Gas storage
- Chemical Storage

## **Tank Design & Engineering Considerations**

- Introduction to API codes & standards
- Roof Types
  - Fixed Dome & Cone
  - Floating Roof
  - Pressurized tanks
- · Suction levels fixed and floating
- Unpumpables
- Tank Emissions
  - Breathing Losses
  - Manipulation Losses
- · Measurement and estimation of losses
- Emission reduction technologies
- · Vapor recovery units
- · Absorption and Scrubbing
- Water drainage systems network and procedures
- · Process water treatment

#### DAY 3

#### **Tank Terminal Operations**

- Transfer Systems
  - Centrifugal pumps types and operation
  - · Piping systems
  - Maximum Flow and pressure
- Ship-shore Transfers
- · Loading and unloading Processes
  - Ship Loading and discharge process
  - Pipeline transfers
  - Truck loading
- The of Bill of Lading
- Sampling and quality control ISO 17025
- · Stock loss
  - Spill and overfill control
  - Level alarms/ independent level alarms
- · Tank gauging and metering
- Instrumentation

## DAY 4

## **Terminal Management**

- · Planning and scheduling
- Terminal inventory
- Unpumpables & pipeline content ownership

- Inventory Control
- · Custody transfer and administration
- Transfer Procedures
- Inter Tank transfers
- Changing service tanks
- Pipeline transfer loss
- Pipeline thermal relief
- Storage & transfer
- Tank calibration/ recalibration
- · Berthing support
- Cargo transfer support
- Emergency response
- Vessel departure support

#### DAY 5

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

- Physical, chemical & hazardous properties of contained fluids
- ISGOTT Required notifications in the event of a release
- · Record keeping and reporting
- Release detection, response, reporting and investigation

# **Tank Maintenance & Inspection**

- API 653 Tank Inspection
  - Tank failure causes and prevention
  - Settling
  - · Corrosion inspection
  - Tank cleaning
- Bunkering
- Product Commingling
- Product Blending
- Product failures
- · Blending exercise



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