



Tank Farm Operations and Performance Training

Description

The Objectives:

Attendance of this five days 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

The Content:

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
- 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

Tank Terminal Operations

- Transfer Systems
- Centrifugal pumps types and operation
- Piping systems
- Maximum Flow and pressure
- Ship-shore Transfers

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- 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

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

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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