



Tank Farm Operations and Performance

Course Objectives:

The tank farm's mission is to perform its daily operations while maintaining a safe storage terminal. Attendance of this five-day seminar 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

المركز العالمي للتدريب والتطوير
International Centre For Training & Development

Course Outline:

Day 1 – Crude Oil and Product Properties

Introduction and Overview

Evaluation of delegates' present skills and knowledge

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

Safety and Risk

- * Firefighting & protection
- * Ignition sources – Electrostatic charge
- * Fire detection and firefighting systems
- * The Ship/Shore Safety Checklist
- * Risk assessments and management
- * Oil Spills
- * Secondary Containment, Bund walls

Day 2 – 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

- * Un pumpables
- * 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
- * Spill and overfill control
- * Level alarms/ independent level alarms

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
- * Bunkering
- * Product Commingling
- * Product Blending
- * Product failures
- * Blending exercise
- * Tank cleaning
- * Bunkering
- * Product Commingling
- * Product Blending
- * Product failures
- * Blending exercise

Who Should Attend?

This course is intended for inspectors and engineers involved with storage tank design, maintenance and inspection, process engineers, maintenance engineers/planners, tank farm managers, oil storage and export managers, section heads and shift supervisors, superintendents, supervisors, foremen, senior operators and plant operators and technicians.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work
- Discussion
- Presentation

Course Fees:

To be advised as per the course location. This rate includes participant's manual, and-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session