TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000209

MECH008 - Tank Farm Operations-Performance and Sustainability

The importance of effective management and handling of an Oil and Gas terminal cannot be over-emphasized.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

The importance of effective management and handling of an Oil and Gas terminal cannot be over-emphasized. The processing, transporting and storing of crude oil or refined petroleum products in tank farms make it imperative for tank farm operators to efficiently manage their inventory and maximize their return on investment. This course is designed for officials who work in the Oil and Gas refinery or product storage facility.

This training course 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.

Who it is for and how it helps

This course was specifically designed for Oil and Gas Operators, Facilities Managers, Marine Terminal Managers, Engineers, Safety and Environmental Personnel, Transfer Supervisors and Oil and Gas Cargo officials.

What you will learn

- Develop good terminal management and handling skills
- Acquire a comprehensive knowledge of operations & management of oil and oil product terminals
- Apply safe practices and procedures during the various operations in terminals including oil spill contingency and emergency response plans
- Apply proper planning and scheduling techniques in storage & transfer systems
- Learn International Regulation and Standards for Oil and Gas Terminals
- Learn different blending techniques
- Do calculation for emissions discharges and dispersion

Curriculum

Modules 01–04

01 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

02 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

03 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

04 Terminal Management

- Comingled stock & Unpumpables
- Terminal inventory Control & Inter Tank transfers

Curriculum

Modules 04–05 · Module 04 — continued

- 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
- Excel Calculations: Blending exercise (Use of PC’s)

05 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

Joining the programme

Contact the Academy and quote course code 000209 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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