



# Oil and Gas Marine Terminals: Operations, Management and Safety in Accordance with International Standards

course code: E6062 From: 20 - 31 January 2025 Venue: Milan (Italy) - course Fees: 6750 Euro

## Introduction

This five day course is essential for those involved in the management and operation of on-shore and off-shore terminals

## Topics discussed include:

- Hydrocarbon properties & handling
- Regulations & Requirements
- Terminal Planning
- Vessel Operations
- Terminal Management & Operations
- Security & Safety and other essential topics related to Export/Import Oil & Gas

## Objectives

- Gain in-depth knowledge on operations & management of oil & gas marine terminals
- Recognize the international regulations & requirements for the oil & gas marine terminals
- Apply proper planning techniques in storage & transfer systems and command of the various planning and transfer requirements for oil & gas marine terminal
- Discuss the different vessel operations in the oil & gas marine terminal such as oil tankers (crude & product) and gas carriers (LNG / LPG)
- Develop good terminal management skills and employ various terminal support operations such as berthing support, cargo transfer support, emergency response and vessel departure support
- Apply proven safe practices and procedures during the various operations in oil & gas terminals and manage oil spill contingency and emergency response plans
- Employ the latest qualitative and quantitative risk assessment techniques in oil & gas marine terminal operations

## Training Methodology

The seminar will be conducted along workshop principles with formal lectures, case studies and interactive worked examples. Relevant case studies will be provided to illustrate the application of each tool in an operations environment. Each learning point will be re-enforced with practical exercises. There will be ample opportunities for discussion and sharing experiences.

## Organisational Impact

**Professional management and operation of oil and gas marine terminals is vital to the budgetary success of the operations organisation. The organization will realise:**

- Improved operational integrity
- Improved operational performance
- Improved equipment usage
- Better safety record
- Improved terminal profitability
- Improved terminal integration and operation.

### Personal Impact

#### Delegates will enhance their competencies in the following areas:

- Operations & management of oil & gas marine terminals
- Understanding of international regulations & requirements for the oil & gas marine terminals
- Development of good terminal management skills
- Qualitative and quantitative risk assessment techniques in oil & gas marine terminal operations
- Vessel operations in the oil & gas marine terminal such as oil tankers (crude & product) and gas carriers (LNG / LPG)
- Planning techniques in stowage & transfer systems

### SEMINAR OUTLINE

#### Cargo Properties

- Course Overview and Introductions
- Dangerous Cargos
  - Toxicity
  - Confined spaces
  - Breathable atmospheres
- Hydrocarbon properties
- Crude oil
- Liquified Petroleum Gas
- Liquified Natural Gas
- UEL & LEL
- BLEVE
- Pancake cloud explosions
- Fires & Explosions

#### Storage & Transfer

- Storage Tanks
  - Atmospheric aboveground storage tanks
  - Floating roof, fixed roof, variable vapour space and pressurized tanks
  - Tank inspections & cleaning
- Transfer Systems
- Centrifugal pumps design and operation
- Piping systems
- Flow and pressure matching
- Marine Loading Arms

- Lightering
- The Ship/Shore Safety Checklist
- Ship-shore Transfers

## Harbour & Vessels

- Jetties, quays, wharves & SBMs
  - Harbour design and construction
  - Sizing & tidal effects
  - Depth constraints & dredging operations
  - SBM design & construction
- Hoses
- Cargo compatibility
- Marking & testing
- Storage & maintenance
- Disposal of tanks washings, slops & dirty ballast
- Bunkering
- Communications & emergency response plans
- Shipboard management

## Safety and Risk

- Ignition sources
  - Electrostatic charge
  - Hazardous zone classification
  - Intrinsically safe equipment
- Fire fighting & protection
- Fire detection systems
- Fire fighting systems
- Shipboard firefighting systems
- Risk assessments
- Risk management
- Qualitative and quantitative risk assessment techniques
- Risk

## Terminal Management

- Storage & transfer planning
- Berthing support
- Cargo transfer support
- Emergency response
- Vessel departure support
- Security and vessel access
- International regulations & requirements for oil & gas marine terminals