



Arabian Institute For Training

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# Oil and Gas Marine Terminals

## INTRODUCTION

- In today's oil & gas industry, the transport of crude and other refined products is predominantly done by large sea carriers. In this respect, the organization and safe & operation of marine terminals is considered of utmost importance for efficient transferring and storing of petrol products at the designated facilities. Professionals in charge of operating and managing of Oil & Gas Marine Terminals are required to have full and updated knowledge of Health, Safety, Security, and Environment (HSSE) aspects, including mechanical integrity of equipment and safety of operation procedures that are governed by international regulations and standards, ISGOTT, EMA, etc., together with the environmental pollution protection aspects, according to MARPOL Convention.
- In this Oil and Gas Marine Terminals training seminar, the participants coming from companies that operate marine terminals will be provided with the necessary knowledge and updated tools and skills that will enable them to successfully handle various technical and safety issues during terminal operations such as cargo transfer support, including custody transfer, emergency response and vessel berthing support, according to international regulations and standards. This Oil & Gas Technology training seminar will focus on both managerial and technical aspects of terminal operation that are prerequisite for successful operation of such complex facilities. This Oil and Gas Marine Terminals training seminar will include several workshops with real problems from the terminal practice which will enable discussions and exchange of experiences.

This training seminar will feature:

- Hydrocarbon Properties & Handling
- Regulations & Requirements
- Terminal Operation and Safety Management
- Vessel Operations and Interaction with Terminal
- Terminal Emergency Organization
- Security & Safety According to International Standards

## OBJECTIVES

By the end of this training seminar, the participants will be able to:

- Identify the important aspects of operations of oil & gas marine terminals
  - Follow the international regulations & requirements
  - Carry out planning of storage & transfer systems for different petrol products
  - Understand the procedure of interaction with oil tankers and gas carriers
  - Manage and organize the emergency response plans in case of oil spill
  - Apply updated methods of risk assessment in marine terminal operations
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## TRAINING METHODOLOGY

- This Oil and Gas Marine Terminals training seminar will be conducted along workshop principles with formal lectures and interactive worked examples included in several workshops. Presented also will be several illustrative and instructive videos. The emphasis in this training seminar will be on the explanation of all technical points and providing answers to problems that are encountered in everyday situations related to operation and management of terminal facilities.
- Each learning point will be reinforced with practical examples. There will be ample opportunities for active discussion and sharing professional experiences and exchange that will help solidify the gained knowledge. All training seminar materials will be provided.

## ORGANISATIONAL IMPACT

- Professional management and operation of Oil & Gas marine terminals is vital to the budgetary success of the organization.

The organization will realize:

- Improved Operational Integrity
- Improved Operational Performance
- Improved Equipment Usage
- Better Safety Record
- Improved Terminal Profitability
- Improved Terminal Integration and Operation

## PERSONAL IMPACT

- Operations & Management of Oil & Gas Marine Terminals
- Understanding of International Regulations & Requirements for Marine Terminals
- Development of Good Terminal Management Skills
- Quantitative Risk Assessment Techniques in Marine Terminal Operations
- Vessel Operations in Marine Terminal
- Planning Techniques in Storage & Transfer Systems

## WHO SHOULD ATTEND?

This training seminar is suitable to a wide range of professionals but will greatly benefit:

- Marine Terminal Facility Managers and Coordinators
  - Terminal Superintendents, Supervisors and Engineers
  - Safety and Environmental Managers, Engineers and Officers
  - Spill Management Team Members
  - Transfer Supervisors
  - Marine Shipping Coordinators
  - Dock Maintenance Planners
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## Course Outline

### Cargo Properties

- Seminar Overview and Introductions
- Dangerous Cargos
- Toxicity
- Confined Spaces
- Breathable Atmospheres
- Hydrocarbon Properties
- Crude Oil
- Liquified Petroleum Gas
- Liquified Natural Gas
- Fires & Explosions
- UEL & LEL
- BLEVE
- Pancake Cloud Explosions

### Storage & Transfer

- Storage Tanks
- Atmospheric above Ground Storage Tanks
- Floating Roof, Fixed Roof, Variable Vapor Space and Pressurized Tanks
- Tank Inspections & Cleaning
- Transfer Systems
- Centrifugal Pumps Design and Operation
- Piping Systems
- Flow and Pressure Matching
- Ship-shore Transfers
- Marine Loading Arms
- Lightering
- The Ship / Shore Safety Checklist

### Harbor & 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
  - Shipboard Management
  - Disposal of Tanks Washings, Slops & Dirty Ballast
  - Bunkering
  - Communications & Emergency Response Plans
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## 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
- Risk Assessments
- Risk Management

## 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



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