Training Title:
TANKS AND TERMINALS

Training Duration:
5 Days

Training Venue and Dates

REF SM348	Tanks & Terminals	5	03-07 August 2025	$5,500	Cairo, Egypt.

In any of the 4 or 5 star hotel. Exact venue will be informed soon.

Training Fees

- **$5,500 per participant for Public Training including Course Materials/Handouts, Tea/Coffee, Refreshments & Lunch**

Training Certificate

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

TRAINING OVERVIEW

TRAINING INTRODUCTION

The Oil and Gas Marine Terminals: Operation, Management, and Safety course is designed to provide participants with an in-depth understanding of the operation, management, and safety procedures involved in marine terminals used for the import/export of oil, gas, and other bulk commodities. Marine terminals play a critical role in the global energy supply chain, and the effective management of these terminals is essential for safe, efficient, and environmentally responsible operations.

TRAINING OBJECTIVES

By end of course participants will be able to understand

- **Understand the Components and Functions of Marine Terminals: Gain knowledge of the physical and operational components of oil and gas marine terminals.**
- **Ensure Efficient Terminal Operations: Learn how to effectively manage the loading and unloading processes, storage, and transportation of oil and gas products.**
- **Manage Marine Terminal Infrastructure: Understand how to maintain and manage terminal infrastructure, including storage tanks, pipelines, and mooring systems.**
- **Implement Safety and Emergency Response Procedures: Learn safety protocols, risk management practices, and emergency response strategies to prevent accidents and minimize operational hazards.**

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- **Ensure Compliance with Industry Regulations: Familiarize with national and international regulations governing marine terminal operations, including environmental and safety standards.**
- **Address Environmental and Sustainability Issues: Develop strategies for reducing the environmental impact of terminal operations, including spill prevention, waste management, and emissions reduction.**
- **Optimize Terminal Performance and Efficiency: Learn how to implement performance metrics, identify areas for improvement, and utilize technology to optimize terminal operations.**

TRAINING METHODOLOGY:

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivate everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of the multiple-choice type will be made available on a daily basis to examine the effectiveness of delivering the course.
All presentations are made in excellent colorful power point. Very useful Course Materials will be given.

- **30% Lectures**
- **30% Workshops and work presentation**
- **20% Group Work& Practical Exercises**
- **20% Videos& General Discussions**

WHO SHOULD ATTEND?

- **Marine terminal operators**
- **Port and terminal managers**
- **Operations managers and supervisors**
- **Safety officers and environmental managers**
- **Maintenance engineers and technicians**
- **Maritime logistics and transportation professionals**
- **Regulatory and compliance officers**
- **Project managers in the oil and gas sector**
- **Ship operators and crew working in marine terminals**

DAILY COURSE OUTLINE

Day 1: Introduction to Oil and Gas Marine Terminals

- **Overview of Marine Terminal Operations**
  - Role and importance of marine terminals in the oil and gas supply chain

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  - Types of marine terminals: crude oil, refined products, LNG, LPG, and bulk terminals
  - Key components of a marine terminal: jetties, berths, pipelines, tanks, and storage systems
  - Basic principles of cargo handling, including loading and unloading
- **Marine Terminal Layout and Infrastructure**
  - Terminal layout and key infrastructure components
  - Storage tanks and their design considerations
  - Mooring systems: types, functions, and maintenance
  - Pipeline systems: configuration, maintenance, and inspection
  - Terminal equipment: pumps, valves, meters, and control systems
- **Terminal Operations and Logistics**
  - Unloading and loading processes: from ship to shore and vice versa
  - Product storage and handling procedures
  - Distribution systems and integration with transportation networks (pipelines, rail, trucks)

Day 2: Marine Terminal Management

- **Operational Management**
  - Managing daily terminal operations: coordination of activities, workflow, and scheduling
  - Managing cargo throughput, flow rates, and storage capacity
  - Terminal performance monitoring and optimization strategies
  - Implementing key performance indicators (KPIs) for terminal efficiency
- **Resource and Personnel Management**
  - Managing terminal staff: roles, responsibilities, and training
  - Ensuring proper maintenance of equipment and infrastructure
  - Coordination between terminal operations, shipping companies, and port authorities
- **Logistics and Supply Chain Management**
  - Integrating terminal operations with broader supply chain management
  - Coordination with oil and gas production, refining, and distribution sectors
  - Managing disruptions and delays in terminal operations
  - Scheduling and coordination of vessels, trucks, and rail services

Day 3: Safety Procedures and Risk Management

- **Safety and Environmental Risks in Marine Terminals**
  - Identifying common hazards in marine terminal operations: cargo spills, fire, equipment failure, and personnel accidents
  - Assessing and managing risks: risk assessment techniques and tools

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- Understanding the impact of marine terminal operations on the environment (oil spills, air emissions, waste management)

- **Safety Standards and Best Practices**
  - International safety regulations and standards: OSHA, IMO, ISPS Code, MARPOL, etc.
  - Marine terminal-specific safety regulations and certifications
  - Best practices for personnel safety, including PPE, training, and emergency drills
- **Emergency Response Procedures**
  - Developing and implementing emergency response plans for various incidents: oil spills, fires, chemical leaks
  - Training staff for emergency response situations
  - Crisis management and communication during an emergency

Day 4: Environmental Compliance and Sustainability

- **Environmental Regulations and Compliance**
  - National and international environmental regulations for marine terminals: environmental permits, discharge standards, etc.
  - MARPOL (Marine Pollution) regulations and their application in oil and gas terminals
  - Air and water quality monitoring, including effluent treatment and waste disposal
- **Oil Spill Prevention and Response**
  - Preventative measures to avoid oil spills: containment, leak detection, and double-hull designs
  - Spill response planning: containment, recovery, and remediation
  - Environmental impact assessment and management
- **Sustainability in Marine Terminal Operations**
  - Implementing sustainability practices: reducing emissions, energy efficiency, waste minimization
  - Alternative fuels and renewable energy sources in terminal operations
  - The role of technology in minimizing environmental impact (e.g., automation, sensors, energy management)

Day 5: Performance Optimization and Future Trends

- **Optimizing Terminal Operations**
  - Improving operational efficiency: automation, digital technologies, and predictive maintenance
  - Implementing process optimization techniques: lean operations, throughput maximization
  - Reducing operational downtime through preventive maintenance strategies
- **Terminal Technology and Innovation**

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- Emerging technologies in marine terminal operations: IoT sensors, big data analytics, AI, and machine learning for predictive maintenance
- Automation in loading and unloading processes (robotics, automated mooring systems, etc.)
- Smart terminals: the integration of digital twins and AI for enhanced decision-making

- **Future Trends in Marine Terminals**
  - The impact of decarbonization and environmental regulations on marine terminal operations
  - Trends in sustainable terminal design and operation
  - The future of LNG, hydrogen, and renewable energy in terminal facilities
  - Smart port initiatives and the evolution of global supply chains

NOTE:
Pre & Post Tests will be conducted.
Case Studies, Group Exercises, Group Discussions, Last Day Review &Assessments will be carried out.

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