

# Loading Master Training Course for Oil and Gas Terminals

11 – 15 July 2027
Zanzibar

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## Overview

The Loading Master Training Course for Oil and Gas Terminals is a one-week course for terminal representatives, marine loading masters, and tanker liaison officers who leave with an operational cargo transfer dossier to supervise berth interface activities safely. Uncoordinated ship-shore operations, hazardous vapor releases, and unmanaged pressure surges during bulk liquid transfer cause catastrophic terminal incidents and demurrage disputes. This course resolves these risks through rigorous alignment with ISGOTT 6 safety checklists, MEG4 mooring management, and standardized custody transfer calculations. Agile Leaders Training Center delivers the Loading Master Training Course for Oil and Gas Terminals.

## Who Should Attend

- Terminal loading masters responsible for supervising cargo transfer operations and coordinating ship-shore safety protocols.
- Marine operations supervisors managing berth allocation, mooring line security, and dockside emergency response readiness.
- Cargo superintendents overseeing bulk liquid custody transfer, ullage verification, and quantity calculations.
- Berth operators directing marine loading arm connection, line draining, and vapor recovery systems.
- Health, safety, and environment specialists auditing marine terminal compliance against international maritime safety standards.

The course assumes participants actively work at marine bulk liquid facilities or onboard tankers, and it leaves out introductory maritime seafaring skills and general warehouse storage tasks.

## Departments and Industries

The course draws operational cases from marine terminal and hydrocarbon transportation environments.

- Crude oil export and import terminals
- Liquefied natural gas and liquefied petroleum gas marine facilities
- Petrochemical and bulk liquid chemical loading docks
- Marine terminal logistics and operations departments
- Commercial custody transfer and marine surveying agencies

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## Learning Objectives

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

- Execute joint ship-shore safety inspections using ISGOTT 6 Ship/Shore Safety Checklists.
- Evaluate mooring arrangements and line tension limits in accordance with MEG4 criteria.
- Calculate custody transfer quantities applying standard API gravity and temperature corrections.
- Prioritize emergency shutdown procedures during pressure surges or communication failures.
- Analyze vapor recovery and purging requirements under international gas and tanker codes.
- Formulate an operational cargo transfer dossier to assure safe terminal operations.

## Course Agenda

### Day 1: Regulatory Frameworks and Ship-Shore Interface

- International safety governance using ISGOTT 6 and IMO FAL.6/Circ.14/Rev.3 reference standards
- Terminal baseline assessment criteria based on OCIMF Marine Terminal Information Booklets
- Ship-to-shore communications protocols and emergency acoustic signaling contingencies
- Pre-arrival information exchange and cargo manifest verification procedures
- Stop Work Authority frameworks and Lock-out/Tag-out safety interfaces on marine berths

### Day 2: Mooring Integrity and Berth Safety Management

- Mooring line management plans and environmental limit setting under OCIMF MEG4 guidelines
- Wind, wave, and current threshold evaluation for pilot boarding and berth operations
- Dynamic tension monitoring and snap-back hazard mitigation during tidal fluctuations
- Single point mooring and conventional buoy mooring operational boundaries
- Under-keel clearance calculation and channel draft monitoring protocols

### Day 3: Cargo Transfer Systems and Pressure Surge Control

- Centrifugal, booster, and stripping pump performance curves and manifold line-up verification
- Marine loading arm positioning, cooldown protocols, and cargo hose inspection standards
- Pressure surge analysis and hydraulic shock prevention during valve closures
- Emergency Shutdown System warm and cold testing protocols per SIGTTO guidelines
- Inert gas system management, tank atmosphere control, and volatile organic compound recovery

### Day 4: Custody Transfer Surveying and Hazard Management

- Static ullage measurement, temperature correction, and API gravity calculations
- Custody transfer survey documentation and meter factor verification procedures
- Toxic gas risk mitigation focusing on hydrogen sulfide and benzene exposure controls
- Static electricity hazard prevention during initial flow and cargo topping-off stages
- Marine terminal Tier-1 oil spill containment and firefighting foam system readiness

## Day 5: Practical Terminal Operations and Interface Assurance

- Suggested activity: Audit an ISGOTT 6 Ship/Shore Safety Checklist for a crude oil loading operation
- Suggested activity: Model a mooring line load assessment under changing environmental limits using MEG4 tools
- Suggested activity: Calculate custody transfer figures and ullage discrepancies from terminal survey data
- Suggested activity: Execute a simulated emergency shutdown response following communication disruption
- Capstone exercise: Formulate an integrated operational cargo transfer dossier resolving multi-product berth interface challenges

## Practical Exercises

The course uses realistic marine terminal transfer logs, mooring analysis records, and safety checklists.

- Suggested activity: Complete a joint ISGOTT 6 Ship/Shore Safety Checklist identifying compliance gaps on an arriving tanker.
- Suggested activity: Calculate under-keel clearance and mooring tension limits under adverse tidal and wind conditions.
- Suggested activity: Reconcile shore tank ullages against ship figures applying API standard volume correction factors.
- Suggested activity: Simulate an emergency loading arm disconnection during a rapid pressure surge event.

## FAQs

### Who suits the Loading Master Training Course for Oil and Gas Terminals?

The Loading Master Training Course for Oil and Gas Terminals suits marine loading masters, terminal superintendents, and operations specialists. The course assumes active involvement in dockside or tanker operations, leaving out basic maritime navigation and entry-level seamanship tasks.

### How does the Loading Master Training Course for Oil and Gas Terminals differ from general marine safety training?

General marine safety training covers broad vessel safety regulations and standard firefighting. This course focuses specifically on the ship-shore interface, ISGOTT 6 checklists, MEG4 mooring management, custody transfer surveying, and loading arm emergency shutdown protocols at bulk liquid terminals.

## Which international standards guide the Loading Master Training Course for Oil and Gas Terminals?

The course applies international guidelines including ISGOTT 6, OCIMF Mooring Equipment Guidelines MEG4, SIGTTO recommendations, and the IMO International Gas Carrier Code, alongside terminal baseline assessment criteria.

## What emergency procedures are emphasized in the Loading Master Training Course for Oil and Gas Terminals?

The course prioritizes emergency shutdown warm and cold testing, marine loading arm quick-release operations, Tier-1 oil spill containment, and secondary communication procedures during complete radio system failure.

## Conclusion

Participants return to their facilities equipped with an operational cargo transfer dossier to guide dockside operations. This technical asset enhances interface coordination between tankers and berths while mitigating pressure surges and containment risks. Operations personnel immediately improve vessel turnaround times and maintain strict adherence to international marine safety standards.