
Ship-Shore Cargo Transfer Operations for Marine Terminals Course

11 – 15 January 2027
Milan





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Programme Summary

Ship-shore cargo transfer operations for marine terminals is a one-week training course for terminal and marine leaders at managerial level, culminating in a cargo transfer assurance plan for a berth or terminal they oversee. Every loading or discharge of crude, products, LPG, LNG or petrochemicals joins two organisations and two sets of equipment for many hours. The approach equips leaders to control the interface through agreed plans, checks, measurement and emergency arrangements. Mars Training Centre UK delivers this programme in ship-shore cargo transfer operations.

The Business Case

Most serious terminal incidents, cargo disputes and berth delays begin at the ship-shore interface: an incompatible mooring, a skipped check or a measurement gap. Terminals that govern this interface tightly protect people and the environment, turn vessels around faster and settle fewer quantity claims.

- Process Safety and Spill Exposure: Falls as ship-shore checks, emergency shutdown links and vapour controls are verified before and during transfer.
- Berth Turnaround Time: Improves as compatibility, documentation and loading plans are agreed before the vessel arrives.
- Cargo Loss and Quantity Claims: Reduce as measurement, sampling and ship-shore figures are reconciled consistently.

Principles and Evidence Base

- ISGOTT, International Safety Guide for Oil Tankers and Terminals: Provides the Ship/Shore Safety Checklist and terminal practices applied in Sessions 1 to 4.
- SIGTTO Guidance for Liquefied Gas Carriers and Terminals: Frames the additional controls for LPG and LNG transfers in Session 3.
- OCIMF Mooring Equipment Guidelines MEG4: Guide mooring and berth compatibility assessment in Session 2.
- ISO 28460: Sets out the LNG ship-to-shore interface and port operations requirements reviewed in Session 3.

Intended Participants

- Leaders accountable for the safe operation of tanker berths, jetties or single point moorings.
- Managers who approve terminal operating procedures and vessel acceptance criteria.
- Senior loading masters and marine superintendents who supervise cargo transfers.
- Operations heads responsible for custody transfer quantities and cargo claims.



The programme serves crude export terminals, refinery and product jetties, LPG and LNG terminals, petrochemical ports and port authorities.

Learning Outcomes

1. Participants will be able to evaluate ship-shore compatibility before a vessel is accepted at berth.
2. Participants will be able to construct a pre-transfer agreement covering rates, sequences, communications and stop procedures.
3. Participants will be able to diagnose vapour, static and pressure hazards for different cargo types.
4. Participants will be able to verify measurement and documentation that support custody transfer.
5. Participants will be able to prioritise emergency shutdown, release and spill response arrangements.
6. Participants will be able to justify a loading master competence and procedure framework for their terminal.

Programme Structure

Day 1: Ship-Shore Cargo Transfer Interface and Responsibilities

Who is responsible for what when a ship and a terminal transfer cargo?

- Roles of the Master, Loading Master and Terminal Representative
- ISGOTT Structure and Terminal Information Exchange
- Ship/Shore Safety Checklist Use and Verification
- Port Facility Security Under the ISPS Code
- Terminal Operating Procedures and Port Regulations Interface

Day 2: Berth Compatibility, Mooring and Pre-Transfer Planning

Can this vessel berth safely, and is the transfer fully agreed before it starts?

- Vessel Vetting and Berth Acceptance Criteria
- Mooring Assessment Using OCIMF MEG4
- Marine Loading Arms, Hoses and Manifold Connections
- Pre-Transfer Conference and Agreed Loading Plan
- Weather Limits, Stop Criteria and Communications

Day 3: Cargo Hazards for Oil, Gas and Chemical Transfers

How do cargo properties change the controls needed during transfer?

- Vapour Emission Control and Inert Gas Practice
- Static Electricity and Ignition Source Control
- LPG and LNG Transfer Under SIGTTO Guidance
- ISO 28460 LNG Ship-to-Shore Interface
- Chemical Cargo Compatibility and Toxic Exposure



Day 4: Measurement, Custody Transfer and Emergency Response

How are quantities proven and emergencies contained?

- Ullage, Sampling and Shore Tank Gauging
- Vessel Experience Factor and Ship-Shore Figure Reconciliation
- Bill of Lading, Cargo Documents and Letters of Protest
- Emergency Shutdown and Emergency Release Systems
- Spill Response Tiers Under MARPOL Annex I Arrangements

Day 5: Applying Ship-Shore Cargo Transfer Assurance

How are compatibility, hazards, measurement and emergencies combined into one terminal plan?

- Compatibility Review for a Participant Berth
- Simulated Pre-Transfer Conference and Stop Decision
- Loading Master Competence Framework Design
- Peer Challenge of Terminal Procedures
- Cargo Transfer Assurance Plan Presentation

Methodology

The programme is built around simulation and case analysis. Participants run pre-transfer conferences, respond to scenarios such as a mooring failure or manifold leak, and analyse incidents from crude, LNG and chemical terminals before testing their own procedures. Each session closes with a short review of a participant terminal against the practice studied.

- Suggested activity: Completing and challenging a Ship/Shore Safety Checklist for a crude tanker.
- Suggested activity: Deciding whether to stop an LNG transfer as weather limits approach.
- Suggested activity: Reconciling ship and shore figures in a disputed product cargo.

Capstone Output

Each participant completes a cargo transfer assurance plan for a berth or terminal they oversee. It covers vessel acceptance criteria, pre-transfer agreement content, hazard controls by cargo, measurement and reconciliation steps, emergency arrangements and a loading master competence framework, ready for review by terminal management.

Frequently Asked Questions

Is ship-shore cargo transfer training suitable for terminal managers without seagoing experience?

Yes. It assumes terminal or marine management experience and explains the shipboard side as it arises.



Which standards underpin ship-shore cargo transfer operations at marine terminals?

It draws on ISGOTT and its Ship/Shore Safety Checklist, SIGTTO guidance for liquefied gas, OCIMF MEG4 for mooring and ISO 28460 for the LNG ship-to-shore interface.

How is the ship-shore cargo transfer assurance plan used at work?

You take back a plan your terminal management can adopt to update vessel acceptance, procedures, emergency arrangements and loading master competence.

How does ship-shore cargo transfer training differ from general port operations programmes?

It concentrates on the tanker-terminal interface during liquid cargo transfer, rather than port planning, container handling or commercial port management.