



Loading Master and Marine Terminal Operations: Ship/Shore Interface and Cargo Transfer



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Introduction:

Loading master errors at a marine terminal rarely stay small: a missed checklist item, an unagreed flow rate, a loose mooring or an unbonded hose can turn a routine cargo transfer into a spill, a fire or a quantity claim. This Core Concept course prepares loading masters and jetty supervisors to run the ship/shore interface on oil, gas and petrochemical berths, from pre-transfer conference through loading, ullaging, sampling and emergency release to cargo documents. Participants build a Jetty Cargo Transfer Control Pack for a berth from their own terminal.

Course Objectives:

- Conduct a pre-transfer conference and complete the ship-shore safety checklist with the vessel's responsible officer
- Inspect mooring arrangements, marine loading arms and cargo hoses before connection and during the transfer
- Agree and monitor a cargo transfer plan covering sequence, flow rates, topping off and stoppages
- Verify ullage, temperature and sample records and follow the cargo quantity calculation at overview level
- Apply vapour control, static electricity precautions, emergency shutdown and emergency release procedures on the jetty
- Prepare transfer documentation, notices and letters of protest that support the terminal in cargo disputes

Target Audience:

- Staff who supervise liquid bulk cargo transfers between tankers and shore on terminal jetties
 - Terminal operators who line up shore tanks, pumps and pipelines for loading and discharging
 - Marine and jetty supervisors responsible for berthing, mooring and connection of cargo equipment
 - Terminal HSE and emergency response staff who cover spill, fire and release scenarios on berths
 - Cargo inspectors and operations coordinators who handle ullage, sampling and shipping documents
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Course Outline:

Day 1: Marine Terminal Foundations and the Loading Master Role

- Liquid Bulk Terminal Types: Crude, Refined Products, LPG, LNG and Chemicals
- Berth and Jetty Layout: Loading Platform, Breasting and Mooring Dolphins
- Loading Master Duties, Authority and the Three-Party Transfer Team
- Terminal Information Book and Port Information Exchange with the Vessel
- Current-State Jetty Operations Assessment Checklist

Day 2: Ship/Shore Interface and ISGOTT Safety Framework

- ISGOTT Structure: Ship, Terminal and Ship/Shore Interface Responsibilities
- Pre-Transfer Conference Agenda: Product Hazards, Rates, Communications and Stop Signals
- Ship-Shore Safety Checklist Completion and Repetitive Checks
- Safety Data Sheets and Cargo Hazard Communication for Petroleum and Petrochemicals
- Hot Work, Enclosed Space and Ignition Source Controls on the Berth

Day 3: Mooring, Connection and Cargo Transfer Operations

- Mooring Plan Review, Line Tending and Environmental Operating Limits
- Marine Loading Arm Operating Envelope, Quick Connect Couplers and Position Monitoring
- Cargo Hose Inspection, Pressure Rating and Connection Records
- Cargo Transfer Plan: Line-Up, Initial Rate, Bulk Rate and Topping Off
- Ballast, Stability and Free Surface Considerations During Loading and Discharging

Day 4: Cargo Quantity, Vapour, Static and Emergency Risk

- Ullage, Innage, Temperature and Free Water Readings at Overview
- Cargo Sampling Points, Sample Labelling and Retention Records
- Vessel Experience Factor and Ship-Shore Quantity Difference at Overview
- Vapour Return Lines, Inert Gas and Static Electricity Bonding Precautions
- Emergency Shutdown Sequence and Emergency Release System Activation

Day 5: Jetty Walkthrough, Documentation and the Control Pack

- Berth Inspection Walkthrough: Moorings, Arms, Hoses and Drip Trays
 - Oil Spill Prevention Checks and Tier 1 Spill Response Kit Deployment
 - Notice of Readiness, Time Sheet, Bill of Lading and Letters of Protest
 - Port State Control Inspection Findings and Pollution Reporting at Overview
 - Jetty Cargo Transfer Control Pack Build and Peer Review
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Skills You Will Gain:

- Ship/Shore Interface Management
- Pre-Transfer Conference Leadership
- Mooring Arrangement Inspection
- Loading Arm and Hose Integrity Checks
- Cargo Transfer Rate Control
- Static Electricity Hazard Control
- Emergency Release Response
- Cargo Claim Documentation

Why Attend This Course:

- Return with a Jetty Cargo Transfer Control Pack prepared for a berth at your own terminal
- Lead the ship/shore interface with vessel officers using one agreed checklist, stop signals and rate plan
- Spot mooring, arm, hose and bonding defects on the berth before they stop a transfer or cause a release
- Protect the terminal in quantity and demurrage discussions with complete time sheets, records and letters of protest

Conclusion:

Safe and accurate cargo transfer depends on the loading master holding the ship/shore interface together from arrival to departure. The course moves from terminal and berth layout and the loading master role, through ISGOTT, the pre-transfer conference and the safety checklist, to mooring, loading arms, hoses and the transfer plan, then to ullage, sampling, vapour, static and emergency release risk. The final day applies a berth walkthrough and produces a Jetty Cargo Transfer Control Pack for use on the next vessel call.
