Advanced Liquefied Gas Terminal Operations and Safety Training Course

24 – 28 October 2027
Toronto

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Training Center

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Ref: 1303_196375 **Date:** 24 – 28 October 2027 **Location:** Toronto **Fees:** 12000 Euro

Overview

Advanced Liquefied Gas Terminal Operations and Safety Training Course is a one-week advanced course for marine terminal managers, jetty supervisors, loading masters, LNG and LPG operators, marine safety officers, process safety engineers, and emergency leaders who leave with a Liquefied Gas Ship/Shore Transfer Control Portfolio. Participants integrate liquefied gas terminal operations, ship shore interface safety, cargo transfer planning, emergency shutdown coordination, marine-terminal safeguards, and emergency response. The course uses the IMO IGC Code, STCW role boundaries, and OCIMF ship/shore checklist practice as references; it does not provide IMO, STCW, OCIMF, or flag-state certification. Agile Leaders Training Center presents safe transfer as a jointly controlled ship-and-terminal operation.

Who Should Attend

- Marine terminal managers responsible for gas-carrier calls and berth readiness
- Jetty supervisors and loading masters controlling cargo-transfer interfaces
- LNG, LPG, and liquefied-gas operations personnel
- Marine and process safety professionals responsible for transfer safeguards
- Emergency-response leaders coordinating ship, terminal, and external resources

The course assumes experience in marine-terminal or hazardous-cargo operations. It excludes seafarer certificate training, vessel design approval, detailed cargo-tank engineering, and basic port induction.

Departments and Industries

The course supports organizations that receive, store, transfer, or dispatch liquefied gases in bulk.

- Marine terminals, ports, jetties, and loading facilities
- LNG, LPG, petrochemical, ammonia, and industrial-gas operations
- Marine operations, cargo operations, HSE, and process safety functions
- Engineering, maintenance, inspection, and emergency-response teams
- Terminal operators, ship agents, harbour authorities, and service providers

Learning Objectives

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

- Differentiate liquefied-gas cargo hazards by pressure, temperature, flammability, toxicity, and reactivity
- Define ship and terminal responsibilities before arrival and throughout transfer
- Verify berth, mooring, loading-system, communications, and cargo compatibility readiness
- Control transfer rates, vapour return, exclusion zones, ignition sources, and changing conditions
- Test emergency shutdown coordination and escalation arrangements
- Document deviations, stop-work decisions, handovers, and post-transfer closeout

Course Agenda

Day 1: Liquefied Gas Cargo and Terminal Risk Context

- IMO IGC Code Scope and Gas-Carrier Hazard Map
- LNG, LPG, Ammonia, Ethylene, and Other Cargo Property Matrix
- Cryogenic, Pressure, Flammability, Toxicity, and Asphyxiation Controls
- Terminal Process and Marine Hazard Interface Diagram
- Transfer Operation Risk-Control Bowtie

Day 2: Ship/Shore Interface and Berth Readiness

- Pre-Arrival Information Exchange Checklist
- Ship and Terminal Responsibility Agreement
- Berth, Fender, Access, and Mooring Readiness Review
- Weather, Tide, Current, and Operating-Limit Matrix
- Ship/Shore Communications and Emergency Signal Test

Day 3: Cargo Transfer Preparation and Control

- Cargo Compatibility and Transfer-Plan Review
- Loading Arm, Hose, Manifold, and Vapour-Return Integrity Check
- Ship/Shore Safety Checklist and Joint Declaration
- Line-Up, Purging, Cooldown, and Initial-Rate Control
- Transfer Rate, Pressure, Temperature, and Tank-Level Monitoring

Day 4: Safeguards and Abnormal Situations

- Emergency Shutdown and Linked ESD Function Test
- Emergency Release, Spill, Leak, and Vapour-Cloud Decision Guide
- Exclusion Zone, Ignition Control, and Simultaneous-Operation Matrix
- Mooring Degradation and Adverse-Weather Response
- Stop-Transfer, Isolation, Depressurization, and Notification Protocol

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Day 5: Emergency Coordination and Applied Practice

- Exercise: Pre-Transfer Ship/Shore Conference
- Exercise: Checklist Challenge and Readiness Decision
- Exercise: Transfer Deviation and ESD Coordination
- Exercise: Leak, Fire, and Evacuation Command Interface
- Capstone Exercise: Liquefied Gas Ship/Shore Transfer Control Portfolio

Practical Exercises

The course uses suggested scenarios that require joint decisions between ship and terminal teams.

- Suggested activity: compare LNG, LPG, and ammonia hazard-control needs.
- Suggested activity: challenge an incomplete ship/shore safety checklist and transfer plan.
- Suggested activity: respond to rising manifold pressure, mooring deterioration, or communications loss.
- Suggested activity: conduct a coordinated ESD, isolation, notification, and recovery review.

FAQs

What makes liquefied gas terminal operations different from conventional cargo handling?

Liquefied gases may be refrigerated, pressurized, flammable, toxic, reactive, or asphyxiating. Safe operations therefore depend on cargo-specific containment, controlled transfer, vapour management, ignition control, and coordinated emergency systems.

What is ship shore interface safety?

Ship shore interface safety defines shared information, responsibilities, limits, communications, checks, and emergency actions between the gas carrier and terminal before, during, and after transfer.

Does this course provide an STCW or IMO certificate?

No. The course uses relevant maritime references for professional learning but does not replace approved seafarer training or provide STCW, IMO, OCIMF, flag-state, or authority certification.

When should a cargo transfer be stopped?

Transfer should be stopped when agreed limits, communications, mooring integrity, equipment status, weather criteria, containment, or emergency readiness are no longer assured under the terminal's procedures.

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Why is emergency shutdown coordination important?

Emergency shutdown coordination aligns detection, alarms, valve closure, pump stopping, linked systems, communications, isolation, and escalation so that ship and terminal actions do not conflict.

Conclusion

The course integrates cargo properties, berth readiness, ship/shore controls, transfer monitoring, safeguards, and emergency coordination. Participants take back a Liquefied Gas Ship/Shore Transfer Control Portfolio containing readiness reviews, responsibility agreements, checklists, limit matrices, response guides, and an exercise record. The portfolio turns separate ship and terminal procedures into one auditable control process.