

LIQUID CARGO AND BALLAST WATER HANDLING ON LNG TANKERS (LICOS)



TARGET GROUP

This training course primary is intended for Masters, Chief Officers and mates who are engaged in liquefied natural gas (LNG) tanker cargo and ballast handling operations.



OBJECTIVES OF THE COURSE

A trainee successfully completing this course will be able to:

- Plan and execute LNG tanker loading and unloading operations
- Demonstrate a practical knowledge of LNG tankers and LNG tanker operations
- Demonstrate knowledge of the carriage of liquefied methane the precautions during loading and unloading and care during the voyage
- Demonstrate an understanding of the factors affecting trim, stability and stress as applicable to LNG tankers
- Demonstrate a knowledge of maritime law embodied in international agreements and conventions, with special regard to:
 - responsibilities under the relevant requirements of the International Convention for Safety of Life at Sea;
 - responsibilities under the International Convention for the prevention of Pollution from ships as applicable to LNG tankers; and
 - methods and aids to prevent pollution of the marine environment by LNG tankers

The course covers all subject areas recommended by IMO Model Course 1.36 “Liquefied Natural Gas (LNG) Tanker Cargo and Ballast Handling Simulator”.



COURSE CONTENTS

The course covers the following topics:

- Cargo planning, safe loading and unloading cargoes
- Maintaining of the ship stability and seaworthiness
- Study of the ship design and systems
- Cargo containment and cargo handling systems
- Ship operating procedures and emergency procedures
- Safety practices and equipment
- General principles of cargo operations.

DURATION OF THE TRAINING COURSE



The duration of the training course is 4 working days.

COURSE LIMITATIONS



The maximum number of participants - 6 persons.

INCOME REQUIREMENTS:



To be assigned on the training course, participant should present:

- National passport
- National license or educational diploma
- Advanced Training on Liquefied Gas Tanker Operations.



THE COURSE PROGRAM

DAY 1

- Familiarization with simulator
 - Types of LNG Ship Simulation
 - Types of Containment System
 - Pipeline Arrangement and Cargo/Ballast Systems
 - Instrumentation and Controls
 - LNG Simulator Operation
 - Basic operations and procedures
- Ballast Operations
 - General provisions
 - Ballasting
 - Deballasting

DAY 3

- Special Operations and Procedures (cont.)
 - Cool-down (Cargo Tanks)
- Cargo Operations
 - Loading Operations
 - Loaded Passage
 - Cool-down (Line) and Discharging
 - Ballast Passage

DAY 2

- LNG Operation-Sequence Overview (Dry-dock to Dry-dock)
- Special Operations and Procedures
 - Final inspection
 - Cargo Tanks Drying and Filling Insulation Spaces
 - Inerting
 - Gassing Up

DAY 4

- Ship Operating Procedures
 - Warming Up
 - Inerting
 - Gas Freeing (Aeration)
 - Evacuating (Creating Vacuum) Insulation Spaces
- Operational Problems
 - Cargo and related operations - normal working
 - Introduction of system faults, malfunctions and accidents
 - Remedial actions



SPECIAL COURSE PROGRAM

Special course program means the alternative LNG Cargo Operations - Management Level (SIGTTO) course, which is best suited to those who already have some LNG experience and follows the syllabus set out by SIGTTO in their suggested LNG competence standard (second edition 2008) at the management level.

The course follows the same dry-dock to dry-dock voyage cycle as the LNG Tanker Operations course but includes a wider range of subjects as set out in the SIGTTO syllabus:

- Familiarization and understanding of LNG transportation requirements
- Manage and operate safety systems and equipment
- Prepare and implement a detailed plan for the entire cargo cycle
- Monitor and review cargo operations
- Plan for and manage cargo operations under non-standard conditions
- Plan for and manage cargo operations under emergency conditions
- Ensure the integrity of cargo containment, cargo equipment and cargo related spaces
- Awareness of the commercial aspects of LNG transportation

Note: during training course theoretical lessons are given using PowerPoint presentations, practical tasks are conducted on SAFE Cargo - Liquefied Natural Gas Tanker Model (Membrane) - L3-DPA Simulations Group.