MERCURY

Managing the Bunkering and Use of LNG Fuel on Ships Course

Istanbul - Turkey: +90 539 599 12 06
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Introduction:

For all vessel operators, environmental pollution issues have become a growing concern. Compliance with MARPOL Annex 6 has brought air pollution from ships into the spotlight, requiring ship owners and operators to mitigate this impact. One approach is utilizing LNG Liquefied Natural Gas fuel; however, this alternative introduces its challenges. This training course aims to illuminate this significant change in vessel fuel type.

This LNG bunkering and fuel management for ships course offers strategies to effectively manage the operation of LNG-fueled vessels. The IGF Code provides a regulatory framework for ships utilizing LNG as bunker fuel, and this course will offer insights into adherence to these regulations.

Targeted Groups:

- Senior Management with high-level responsibility for vessel operations.
- Fleet Managers.
- Technical Managers.
- Vessel personnel.
- Personnel involved in the vessel/bunker facility interface.

Course Objectives:

By the end of this LNG bunkering and fuel management for ship course, participants will be able to:

- Understand the advantages of using LNG fuel for ships.
- Effectively manage the use of LNG fuel onboard.
- Communicate with LNG bunkering terminals and suppliers.
- Handle emergencies involving LNG fuel.
- Comprehend the various LNG fuel system configurations.

Targeted Competencies:

By the end of this LNG bunkering and fuel management for ship course, target competencies will:

- Design and operational characteristics of ships governed by the IGF Code.
- Hazard minimization and Management on ships following the IGF Code.
- Prevention of environmental pollution.
- Oversight and enforcement of legislative compliance.
- Implementation of occupational health and safety protocols.

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Enhancing Bunkering Operations for LNG-Fueled Ships:

Understanding the LNG bunkering process and operations becomes crucial as the maritime industry shifts towards cleaner energy sources. This LNG bunkering and fuel management for ship course module will specifically cover the essential procedural and safety aspects involved in bunkering LNG fuel, from the definition and meaning of bunkering at the shipping interface to the practical exercises of bunkering.

Participants in this LNG bunkering and fuel management for ship training will learn the detailed operational steps and risk management assessments critical to maintaining safe bunkering in shipping.

Course Content:

Unit 1: Definitions of Liquefied Gases and Associated Regulations:

- IGF Code.
- Clarifying the Concept of LNG Fuel.
- LNG Properties.
- Combustion characteristics of fuel LNG.
- LNGs pollution profile.
- The Concept of Cryogenics.
- LNG production and specific properties.
- LNG component makeup.

Unit 2: Health, Safety, Environmental Issues, and Combustion Theory:

- Thermodynamics principles.
- Methane Number and Knock Prevention.
- Techniques for gas detection.
- Managing electrostatic issues.
- Assessing toxicity risks.
- Health and Safety Considerations.
- Addressing environmental hazards.

Unit 3: Managing LNG Fuels Safely:

- Preventing brittle fractures.
- LNG fuel storage systems.
- Techniques for tank gauging.
- Installed safety devices.
- Arrangement of LNG fuel systems.
- Handling LNG safely as fuel LNG.

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Unit 4: LNG Bunkering Systems and their Operational Use:

- Design of physical layouts for LNG-fueled ships.
- Onboard containment system specifics.
- Ensuring electrical safety.
- Identification of hazardous zones.
- LNG fuel transfer process intricacies.
- Safety plans and instruction manuals.
- Bunker checklist preparation and use.
- Inerting, warm-up, and cool-down procedures.

Unit 5: SIMOPs, Emergency Response, and ESD Systems:

- LNG bunkering installations and setups.
- SIMOPs Simultaneous Operations practices.
- Coordinating emergency response strategies.
- Appropriate protective clothing usage.
- Addressing repair and maintenance considerations.
- Emergency Shutdown ESD procedures.
- Safety Management Systems for LNG bunkering operations.
- Addressing health concerns such as Cold Burns.