

CARGO EQUIPMENT OPERATIONAL TRAINING COURSE

The SIGTTO LNG Shipping Suggested Competency Standards (3rd Edition) define 5 performance outcomes at Cargo Equipment Operational level. Each performance outcome comprises

- Knowledge and understanding – acquired from 7 eLearning modules
- Levels of competence – achieved through experiential learning onboard LNG carrying vessels over a minimum of 30 days service

During the onboard training period(s)/sea service, candidates should be able to demonstrate the levels of competence listed under each performance outcome in this document. The Master or Chief Officer will verify the attainment of competence which will be attested in a company letter, to be submitted as part of the candidate's certificate application.

The Levels of Competence at the Cargo Equipment Operational level follow:

1.0 Performance Outcome - Develop Familiarisation and Understanding of LNG Transportation Requirements

You should be able to do the following:

- Identify the properties and characteristics of LNG and other relevant gases and determine their impact on safety and vessel operations
- Identify the regulations and guidelines, vessel designs, characteristics, propulsion systems, materials and cargo related equipment and determine their impact of cargo storage, transportation and containment
- Determine specific loading and discharging features and cargo cycles and confirm individual responsibilities for those involved
- Identify the ship to shore or ship to ship (STS) interface and equipment and determine any issues they might raise during ship and cargo operations
- Confirm the specific ship and cargo operations risk assessment requirements and processes for those involved.

2.0 Performance Outcome - Manage and Operate Safety Systems and Equipment

You should be able to do the following:

- Identify the safety systems and equipment required for carriage of LNG, their parameters, operating specifications, limitations and maintenance requirements
- Confirm that the status of the safety systems and equipment meets operating parameters and requirements
- Confirm appropriate monitoring systems and required tests for safety systems and equipment
- Confirm individual responsibilities for maintaining, testing and inspecting safety systems and equipment
- Verify the results of maintenance, testing and inspection of safety systems and equipment and where they are not in line with required parameters, determine the relevant action and/or inform the appropriate person
- Operate safety systems and equipment, as required, and ensure that they are operated in line with regulations, procedures, guidelines and safe practice
- Provide accurate and complete records.

3.0 Performance Outcome – Execute Planned Cargo Cycle Operations

You should be able to do the following:

- i. Identify all cargo cycle operational parameters and the equipment required, operating specifications, limits and maintenance requirements
- ii. Confirm status of the equipment meets operating parameters and requirements
- iii. Identify the function and conditions of cargo related spaces and confirm appropriate monitoring systems and required tests for cargo containment, cargo equipment and cargo related spaces
- iv. Confirm individual responsibilities for maintaining, testing and inspecting cargo containment, cargo equipment and cargo related spaces and confirm that they are operated in line with required parameters
- v. Determine and take appropriate course of action where departures from normal parameters of the cargo cycle are identified and inform the relevant personnel
- vi. Ensure accurate and complete records and maintained

4.0 Performance Outcome – Execute and Monitor Cargo Operations Under Non-Standard and Emergency Conditions

You should be able to do the following:

- i. Confirm that the type, nature and scale of the condition is correctly determined from alarms and relevant sources.
- ii. Assist in identifying the options for how to deal with the condition safely and in a controlled manner.
- iii. Contribute to risk assessments and planning for each option
- iv. Identify activities and responsibilities of those involved and execute the specified plan in a timely and safe manner.
- v. Monitor the effects of the plan, and identify and ensure that appropriate adjustments to equipment are made as required.
- vi. Contribute to reviewing the plan and operational procedures at the appropriate time and identify lessons learnt and provide feedback to relevant people

5.0 Performance Outcome – Maintain the Integrity of Cargo Containment, Cargo Equipment and Cargo Related Spaces

You should be able to do the following:

- i. Identify cargo containment operational parameters
- ii. Identify the equipment required for cargo operations, its normal parameters, operating specifications and limits and maintenance requirements
- iii. Identify the function and conditions of cargo related spaces
- iv. Confirm individual responsibilities for maintaining, testing and inspecting cargo containment, cargo equipment and cargo related spaces
- v. Ensure that the status of the equipment and monitoring systems within own area of responsibility meets operating parameters and requirements
- vi. Carry out required tests for cargo containment, cargo equipment and cargo related spaces within own area of responsibility
- vii. Determine an appropriate course of action where problems and issues with effectiveness of the maintenance, testing and inspection are identified and inform the relevant personnel Provide accurate and complete records.