

SCENARIOS OF THE EXERCISE LNG BUNKERING BY MODE TERMINAL - SHIP”

TASK SCENARIO AND INITIAL DATA

According to initial conditions, the LNG tank is 5% filled with liquid cargo at the following conditions: -130 [°C], 6 [bar] Bunkering station moored to the terminal.

The task of exercise:

- connect the loading hose to the manifold
- inert the hose
- start loading LNG from the terminal to the ship's tank.

The task must be carried out in a simulator „LNG Bunkering“ (Wartsila). The LNG Bunkering simulator is qualified for usage in basic and advanced IGF code training according to STCW 2010 Manila amendments Code for normal operating conditions and emergency response.

The Wärtsilä LNG Bunkering & Fuel Supply System Simulator promotes greater safety onboard LNG-fuelled vessels by improving the level of training for operators of LNG systems. The design of the simulator is based on the well-proven Wärtsilä LNGPac and Gas Valve Unit (GVU) technologies and includes all auxiliary systems used in connection with the fuel supply.

The system complies with the requirements for training seafarers on gas-fuelled ships to standards demanded by the IGF Code.

The LNGPac simulator enables several different configurations tailored to the customer's needs. The simulator is available for subscription or as a one-time purchase.

The simulator is part of the TechSim 5000 product line, which includes various engine room and liquid cargo handling simulators that have been installed in training centres around the world.

Technological simulator of the LNG fuel gas supply system of the ship is intended for the standard operations and emergency response training. The simulator can be used in basic and advanced IGF code training and certification, as well as refresher training and case studies, targeting maritime training institutes, ship owners and crew management companies.

- Familiarisation with LNG bunkering and fuel gas supply system
- System layout and flow diagrams
- Taking fuel tanks in and out of service
- LNG bunkering procedures

- LNG fuel storage and securing
- LNG fuel delivery to the engines
- Control System, Automation, Alarm and Safety System
- Watchkeeping and Troubleshooting
- Emergency Response

Table 1. Criteria of assessment

#	Activities	Fulfilled or NOT	Points
1.	Establish ship-to-shore connection		1
2.	Prepare manifold		2
3.	Connect the hose		1
4.	Put the system into manual mode		1
5.	Put manifold into venting state		1
6.	Inert the hose and stop on time		1
7.	Pressurize the hose		1
8.	Turn the system into auto mode		1
9.	Open bunkering line		1
10.	Fire Stop		1
	Total		10