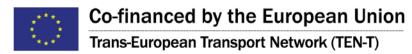




Crew Training Assessment





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INTRODUCTION

As part of the BunkerLogix project, a report addressing specific training needs for the crew of the vessel was developed together with DNV GL. The BunkerLogix Project is led by Repsol, and consists of the development of a LNG Bunkering value chain in the Spanish Mediterranean Coast. Two size vessels are considered:

- Bunker Tanker for Liquefied Natural Gas (LNG) with 5.000 m3 of cargo capacity, categorized as IMO Ship Type 2G and with two (2) independent cylindrical cargo tanks of IMO Type C
- Bunker Tanker for Liquefied Natural Gas (LNG) with 10.000 m3 of cargo capacity, categorized as IMO Ship Type 2G and with two (2) independent cylindrical cargo tanks of IMO Type C

The present report is providing a detailed study on suitable training for a crew of a LNG bunker vessel. The aim is to qualify a specialized crew and get them fit for purpose, which is the full operation of the vessel including bunker operations towards other vessels using LNG as fuel.

The report is taking different regulations and requirements into account. The focus is on international requirements arising from the International Maritime Organisation (IMO). In addition available industry recommendations with regard to the qualification of crews on board of gas carriers, preferably with special link to bunker operations have been reviewed.

The report is presented in three main elements:

- theoretical research
- guidance for crew training
- summary and conclusion

The research part is intended to take international regulations into consideration. This will be the Convention on Standards, Training, Certification and Watchkeeping (STCW) which forms the international basis for a ship's crew qualification. Furthermore interpretation from international bodies may be relevant.

Another core part of the analysis are industry standards and industry best practices from SIGTTO, OCIMF, Classification Societies etc. This format provides sufficient guidance for a training provider regarding the organisation of a course. The structure is including learning objectives, entry requirements to attend the course, course intake limitations, course duration, trainer or staff requirements, a detailed course outline and a course syllabus.

Overall this report is enabling decision makers to understand regulatory and recommended requirements and provide a possible solution for training of a specialised crew on board a bunker LNG vessel.

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