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Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)****Forty-third session**

Geneva, 22-26 January 2024

Item 4 (b) of the provisional agenda

Implementation of the European Agreement concerning the International Carriage of**Dangerous Goods by Inland Waterways (ADN):****Special authorizations, derogations and equivalents****Request for a recommendation on the use of methanol as fuel for the propulsion of the tank vessel “Stolt Ijssel”****Transmitted by the Government of the Netherlands**,*****Summary*

Related documents: ECE/TRANS/WP.15/AC.2/2023/35
Informal document INF.6 of the forty-second session
Informal document INF.7 of the forty-second session
ECE/TRANS/WP.15/AC.2/86 (Paragraph 14)

Introduction

1. In light of the energy transition towards cleaner fuels, several vessels are now being built that use alternative fuels for their propulsion. One of these vessels is the Stolt Ijssel, which will be outfitted with a hybrid methanol/diesel generator. The methanol will be stored in swappable 30 m³ tank on deck in the cargo zone.
2. The Stolt Ijssel is a motor tankvessel Type C.

* Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2024/34

** A/78/6 (Sect. 20), table 20.5



3. The Stolt Ijssel received a derogation from the CCNR, which was presented in informal document INF.6 of the forty-second session. Furthermore, the CCNR is working to expand Chapter 30 and annex 8, with regulations on the use of methanol as a fuel to allow for these kind of propulsion systems on a permanent basis.

4. As the use of methanol as a fuel is currently not allowed according to ADN 7.1.3.31, 9.1.0.31.1, the Netherlands would like to request for a recommendation from the ADN Administrative Committee to issue a derogation for this vessel.

5. The following (updated) documents are provided to support the request for the derogation, the derogation will also refer to these documents:

- (a) System design document ADN “Stolt Ijssel”;
- (b) HAZID report by Lloyds Register;
- (c) General arrangement drawing, including an updated hazardous zone plan;
- (d) Safety data sheet of methanol;
- (e) Bunkering procedure;
- (f) The vessel substance list of the Stolt Ijssel;
- (g) The USCG Compatibility chart 2012;
- (h) Crew training.

Questions received

6. During the forty-second session of the ADN Safety Committee the methanol system for the Stolt Ijssel was presented. Based on the presentation and the documentation provided additional questions were received by the Dutch delegation. Based on the questions the request for the recommendation has been updated to reflect a reporting requirement to the ADN Safety Committee on the project. As well as a reference to the updated documentation included in informal document INF.8.

7. Additionally a question whether the construction of the tank on the flat deck of the vessel would be necessary to be mentioned in the recommendation. However, With respect to the location the tank is considered a fuel tank, and as such, no deviation from 9.3.2.11.2 (a) is applicable. With respect to case of collisions the hazid covers the following:

- What if the ship is involved in a collision event?
- There will be a collision warning system installed on this vessel for the identification and advanced warning for other sailing vessels
- There shall be tank stoppers installed on the storage tank such that there is no movement of the methanol storage tank in the event of a collision
- The distance from the ships side to the Methanol Tank is ~3 m, with spaces between. It shall be welded to the ships girders.

8. Furthermore, comparisons have been made with LNG tanks which also have the LNG tanks located on the deck.

9. Since the ADN describes Personal protective equipment (PP) it is proposed that the recommendation includes the provision that PP is worn when: bunkering methanol, during maintenance and when entering the engine room after engine room alarms.

10. A question with regard to the impacts of incidents/accidents was also raised. Adjacent fire and/explosion events were considered in the HAZID study. As this is a type C tanker with MeOH on the cargo list, and there are no restrictions of carrying other cargoes at the same time. The carriage of MeOH in the fuel tank is considered to be similar to the carriage of MeOH in a cargo tank and other dangerous goods in other cargo tanks. Therefore impact of MeOH in the fuel tank is not considered different than the impact of MeOH in the cargo tanks.

Justification and sustainable development goals

11. The use of alternative fuels for propulsion for inland navigation vessels is one of the steps to be taken in the general energy transition towards the use of sustainable energy. CCNR is planning on expanding ES-TRIN Chapter 30 and Annex 8 to include methanol as a fuel. The ADN Safety Committee could decide to expand the current exception for the use of LNG, to the other systems that are going to be included in the ES-TRIN. This derogation could provide the Safety Committee with further information, which could help make that decision in the future.

12. The issuing of this recommendation is a step towards the regulation of these systems within ADN, as such this proposal could be linked to Sustainable Development Goals 7; to increase substantially the share of renewable energy in the global energy mix, and 13; Climate action.

Action to be taken

13. The ADN Safety Committee is requested to consider the proposals and to advise the ADN Administrative Committee as it deems appropriate.

Annex

Decision of the ADN Administrative Committee relating to the use of methanol fuel system on the tanker vessel Stolt IJssel (ENI 02339855)

Derogation No. X/2024 of XX January 2024

1. Pursuant to paragraph 1.5.3.2 of the Regulations annexed to ADN, the above-mentioned vessel may deviate until 31 December 2028 from the requirements of paragraphs:

- 7.1.3.31 fuel having a flashpoint below 55 degrees
- 9.1.0.31.1 fuel having a flashpoint below 55 degrees

2. The Administrative Committee decides that the use of this methanol fuel system is sufficiently safe if the conditions set by the Central Commission for the Navigation of the Rhine (CCNR) are met at all times.

3. The following additional conditions shall also apply:

- the crew should wear appropriate PP during bunkering, maintenance, and when entering the engine room after engine room alarms

4. All information on the use of the methanol fuel system needs to be collected by the ship owner and kept for at least five years. This info will be submitted to the competent authority upon request.

5. The ship owner will submit an evaluation report to the competent authority [\[and the UNECE secretariat for information of the Administrative Committee\]](#) at the following moments:

- 6 months after the commissioning of the ship
- 2.5 years after the issue of this recommendation
- 5 years after the issue of this recommendation

6. These evaluation reports should at least contain the following information:

- failure and damage of the methanol fuel system
- leakage
- bunkering information
- repairs and alterations of the methanol fuel system
- operational data
- incidents
