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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-first session**

Geneva, 23-27 January 2023

Item 5 (b) of the provisional agenda

**Proposals for amendments to the Regulations annexed to ADN:  
other proposals**

**Alternative propulsion systems/fuels in inland navigation:  
identifying necessary adjustments in the ADN**

**Transmitted by European Barge Union (EBU), and European Skippers Organisation (ESO)\*, \*\***

**Introduction**

1. In line with the goal of achieving the environmental and climate protection aims set by the European Union, as well as the sustainable development goals of the United Nations inland navigation will have to switch to alternative propulsion systems and alternative fuels more and more in the near future. Various technologies are currently being researched. Examples include fuel cell propulsion using hydrogen, methanol, diesel-electric or purely electric propulsion. Which technology will prevail on the market in the end is not yet foreseeable. Nevertheless, developments can already be observed today, which show that there is a strong willingness to invest in the modernisation of the fleet within the inland navigation industry.

2. EBU/ESO are of the opinion that in due time the ADN Safety Committee will have to deal with the question which regulations in the ADN would have to be adapted, to continue guaranteeing the safety of transport of dangerous goods on the inland waterways in future. This issue has been discussed during the fortieth session of the ADN Safety Committee and EBU/ESO were invited to submit a proposal. With the assistance of the Group of Recommended Classification Societies this proposal has been developed.

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\* Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2023/9

\*\* A/76/6 (Sect.20), para. 20.76.



3. At the thirty-sixth session of the ADN Safety Committee in January 2020 this subject has already been addressed. At paragraph 11 of the report of that session (ECE/TRANS/WP.15/AC.2/74) is stated:

"Following the discussion on the use of alternative propulsion technologies on vessels used for the carriage of dangerous goods, the Safety Committee concluded that vessels should maintain the same level of safety irrespective of the type of goods carried and propulsion system used. It was therefore concluded that the required level of safety could be achieved by introducing in the ADN references to the relevant provisions in ES-TRIN. The Safety Committee noted that relevant provisions in ES-TRIN or any other suitable standard should be available in Russian."

4. The use of low flashpoint fuels is mentioned in 7.X.3.31.1, but the present text only refers to ES-TRIN Annex 8, Section 1. This section referred to Liquefied Natural Gas (LNG) at the time it was included in the ADN. However, the European committee for drawing up standards in the field of inland navigation (CESNI) is working on the further development of this Annex 8 to include also other alternative fuels like hydrogen and methanol. At this moment requirements for fuel cells are finalized, the storage of methanol has been adopted, while the storage of hydrogen is nearly completed.

## **Proposal**

5. Taken the previous considerations of the ADN Safety Committee into account, EBU/ESO therefore proposes to consider two options for an amendment of the ADN. Option 2 is the preference of EBU/ESO.

### **Option 1**

Delete 7.1.3.31 and 7.2.3.31.1 from the Regulations annexed to the ADN.

Justification:

The technical requirements for propulsion and auxiliary systems aren't included in the ADN but in ES-TRIN and national regulations. It seems not appropriate to include these in the ADN as well.

### **Option 2**

Amend 7.1.3.31 and 7.2.3.31.1 as follows:

Second indent:

- “the propulsion and auxiliary systems which meet the requirements of Chapter 30 and Annex 8 of the European Standard laying down Technical Requirements for Inland Navigation Vessels (ES-TRIN) as amended.”

Justification:

In this proposal the reference to Section 1 of the Annex 8 of ES-TRIN is deleted. At the present version of ES-TRIN (2021-1) this Section 1 refers to LNG (Liquefied Natural Gas). But the CESNI Committee is working on an update of Annex 8 to allow also other low flashpoint fuels like methanol and hydrogen. This will lead to a renumbering of Annex 8 which makes the reference to Section 1 superfluous.