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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)****Fortieth session**

Geneva, 22–26 August 2022

Item 4 (b) of the provisional agenda

**Proposals for amendments to the Regulations annexed to ADN:
other proposals****Flame arresters for degassing****Transmitted by the Government of the Netherlands******Summary*

Executive summary:	None
Action to be taken:	None
Related documents:	Informal document INF.14 of the thirty-ninth session of the ADN Safety Committee

Introduction

1. During the thirty-ninth session of the ADN Safety Committee the Dutch delegation noted a discrepancy between the requirements of ADN 7.2.3.7.1.3 for degassing to the atmosphere and the equipment of current vessels. ADN 7.2.3.7.1.3 specifies that during degassing operation the gases should be led out of the tank through a flame arrester capable of withstanding steady burning. However, most vessels lead the gases out of the tank through the opening for venting piping, which is equipped with a flame arrester capable of withstanding detonations and deflagrations.

* Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2022/45.

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



2. Since in the Netherlands, no incidents involving any kind of steady burning during a degassing operation are known, the Dutch delegation invited the members of the Safety Committee to share any knowledge concerning incidents during degassing. No such incidents were reported to the Dutch delegation.
3. Steady burning is defined in ADN, referencing standard ISO 16852:2016 as burning longer than 30 minutes. Degassing is an active operation that can be stopped well within 30 minutes.
4. Considering that no incidents with steady burning are known, and that due to the nature of a degassing operation they are unlikely to occur, the Dutch delegation is of the opinion that flame arresters that are capable of withstanding detonations and deflagrations may be able to better counter the dangers that could occur during degassing to the atmosphere.
5. Therefore, the Dutch delegation would like to amend the first paragraph of 7.2.3.7.1.3, as proposed below.

Proposal for amendments

6. Amend the first paragraph of 7.2.3.7.1.3 as follows (deleted text is stricken through, new text is bold and underlined):

“Degassing of empty or unloaded cargo tanks having contained dangerous goods other than those referred to under 7.2.3.7.1.1, when the concentration of flammable gases and vapours given off by the cargo is 10% of the LEL or above, may be carried out while the vessel is underway or at locations approved by the competent authority by means of suitable venting equipment with the tank lids closed and by leading the gas/air mixtures through flame-arresters capable of withstanding ~~steady burning a~~ **detonation** (Explosion group / subgroup according to column (16) of Table C of Chapter 3.2). The concentration of flammable gases and vapours in the vented mixture at the outlet shall be less than 50% of the LEL. The suitable venting equipment may be used for degassing by extraction only when a flame-arrester is fitted immediately before the ventilation fan on the extraction side (Explosion group /subgroup according to column (16) of Table C of Chapter 3.2). The concentration of flammable gases and vapours shall be measured once each hour during the two first hours after the beginning of the degassing operation by forced ventilation or by extraction, by an expert referred to in 8.2.1.2. The results of these measurements shall be recorded in writing.”

Remainder of 7.2.3.7.1.3 unchanged.

Action to be taken

7. The Safety Committee is invited to consider the amendment proposed in paragraph 6 above and to take action as it deems appropriate.
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