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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 5 (b) of the provisional agenda

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

Amendment of the definition for "Safety valve" in 1.2.1 of ADN and consequential amendments

Transmitted by the European Barge Union and the European Skippers Organization (EBU/ESO)*. **

Introduction

1. By this proposal, EBU/ESO would like to inform the ADN Safety Committee about indications from safety valve manufacturers on the definition "Safety valve" in 1.2.1 of ADN and, on the basis of this information and problem description, ask the ADN Safety Committee to decide on an amendment of the definition and consequential amendments.

Proposal

2. EBU/ESO request to amend the wording of the definition of "Safety valve" in 1.2.1 of ADN, by deleting the wording "spring-loaded" so that the new definition reads:

"*Safety valve* means a device which is activated automatically by pressure the purpose of which is to protect the cargo tank against unacceptable excess internal pressure or negative internal pressure (see also, *High velocity vent valve*, *Pressure-relief device* and *Vacuum valve*)."

3. EBU/ESO also request as consequential amendments to delete the wording "spring-loaded" in 7.2.3.7.2.3, 8.6.4, 9.3.1.62, 9.3.2.62 and 9.3.3.62 of ADN.

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



Justification

4. The term "Safety valve" is used in the ADN for all pressure relief valves and vacuum valves, regardless of the design pressure of the cargo tanks and valves, e.g. for the protection of both closed cargo tanks and pressure tanks (≥ 400 kPa, according to the definition for pressure tank in 1.2.1). On such pressure tanks, valves of special construction with high opening pressures are used, which are usually spring-loaded. These valves are standardised (ISO 4126-X series of standards), are referred to in the standards as "Safety valves" and can be used from 10 kPa opening pressure according to the standard.
 5. For cargo tanks of inland vessels, however, valves with low opening pressures are used whose construction is not standardised. There are various constructions for realising such low opening pressures. One technical possibility is the use of so-called weight-loaded valve discs. In 9.3.2.21.7 (b) and 9.3.2.25.9, the ADN specifies 5 kPa as the highest design pressure for vacuum valves. Such opening pressures can be realised with simple weight-loaded valves.
 6. At higher opening pressures, the handling of larger, weight-loaded valves becomes impractical, so that technically more complex, spring-loaded valves are preferred.
 7. The high velocity valves required in the ADN with opening pressures up to 50 kPa are constructed in various designs, for example with a combined weight and magnetic loading of the valve cones. In the case of these high-velocity valves, too, no spring-loading of the valves is required from a technical and safety point of view.
 8. The spring-loading of a safety valve is therefore only one of several appropriate construction options and is only sensible dependent on the opening pressures that are to be countered. To maintain technical flexibility in the design, depending on the purpose of the use of the safety valve, the feature "spring-loaded" should be deleted in the definition of "Safety valve" in 1.2.1 of ADN. For the same reason, the attribute "spring-loaded" would also have to be deleted in 7.2.3.7.2.3, 8.6.4, 9.3.1.62, 9.3.2.62 and 9.3.3.62 of ADN as consequential amendments.
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