



# Economic and Social Council

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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-second session

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Item 1 of the provisional agenda

Item 4 (b) of the provisional agenda

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

### **Amendment to the definition of "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 of "Safety valve" in 1.2.1 of ADN and, on the basis of this information and problem description, ask the Safety Committee to decide on an amendment to 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 word "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).”

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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.2/2023/36

\*\* A/77/6 (Sect. 20), table 20.6.



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

## **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 ( $\geq 400$  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 achieving such low opening pressures. One technical possibility is the use of so-called weight-loaded valve discs. In paragraphs 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 achieved with simple weight-loaded valves.

6. At higher opening pressures, the handling of larger, weight-loaded valves becomes impractical, so in those technically more complex situations, spring-loaded valves are preferred.

7. The high-velocity valves required in the ADN with opening pressures up to 50 kPa are also 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" should be deleted in paragraphs 7.2.3.7.2.3, 8.6.4, 9.3.2.62 and 9.3.3.62 of ADN as consequential amendments.

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