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COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the Transport of Dangerous Goods

(Twenty-first session, 1-10 July 2002, agenda item 5 (b))

TANKS

Miscellaneous proposals (Chapters 4.2 and 6.7) Transport of solid substances in portable tanks

Comments on document ST/SG/AC.10/C.3/2002/33

Transmitted by the International Union of Railways (UIC/IUR)

The UIC/IUR welcomes the initiative from the USA to extend the number of solid substances to be transported in portable tanks on the basis of the proposed rationalized approach

The UIC/IUR proposes to discuss the following questions in addressing document ST/SG/AC.10/C.3/2002/33.

Definition of “solids”

It should be clear what is meant by the word “solids” in the context of the transport of substances in portable tanks. A clear distinction should be made between the transport of:

- a - Powdery or granular substances,
- b - Solids handed over for transport in the molten state at elevated temperatures,

for the following reasons:

The construction and the equipment of portable tanks for the transport of powdery or granular substances or portable tanks for molten substances is fundamentally different:

Tanks for powdery substances are in most cases discharged under pressure in a fluidised bed. The discharge outlets are in accordance with 6.7.2.6.2 (two shut-off devices).

Portable tanks for molten substances are designed and equipped like tanks for liquids and the bottom discharge outlets are in accordance with 6.7.2.6.3 (three shut-off devices).

Such tanks are, however, in most cases equipped with thermal isolation and a heating system.

As the bottom openings required in the tank instructions proposed by the USA: T1, T3 and T6 are in accordance with 6.7.2.6.2, only powdery or granular substances should be allowed in such tanks. For substances in the molten state tank instructions for liquids of the same hazard level should be used, e.g. T4, T7 and T14.

The maximum melting point of 100 °C for transport in the molten state seems to be too low for practical reasons. A melting point of 180 °C is more in accordance with the needs of the chemical industry.

The rationalized approach

The transport of substances of classes 4.2 and 4.3, PG I, should be restricted to substances in the molten state because of technical problems and risks with loading and unloading of such substances in powdery or granular form.

The test pressure of tanks for the transport of substances of classes 6.1 and 8, PG I, in powdery or granular form, should be at least 6 bar and tanks for these substances should be hermetically closed according to 6.7.2.8.3.

Proposal

The UIC/IUR proposes to add to the rationalized approach in Annex 1 two columns for the TI's and TP's for the transport of solids in the molten state and to use the columns with the TI's and TP's in the proposal for the transport of solids in powdery or granular form.
