



**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****Thirty-seventh session**

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Item 5 of the provisional agenda

**Miscellaneous proposals of amendments to the Model Regulations
on the Transport of Dangerous Goods****Amendment to 6.7.2.****Transmitted by the expert from Spain¹****Introduction**

1. The expert from Spain proposes some modifications and amendments to section 6.7.2 of the Model Regulations that can improve significantly safety aspects.

Proposals**Proposal 1 (sub-section 6.7.2.13)**

2. It is proposed to amend paragraph 6.7.2.13.2 to read as follows:

“6.7.2.13.2 The rated flow capacity marked on the spring-loaded pressure devices shall be determined according to **ISO 4126-1:2004 and ISO 4126-7:2004**.”.

No significant changes at this point have been made in the standard.

¹ In accordance with the programme of work of the Sub-Committee for 2009-2010 approved by the Committee at its fourth session (refer to ST/SG/AC.10/C.3/68, para. 118 (a) and ST/SG/AC.10/36, para. 14).

Proposal 2 (sub-section 6.7.2.14)

3. Because back pressure (built up or superimposed) on the outlet side of a safety valve-affecting set pressure and/or mass flow- has to be considered, it is necessary to amend section 6.7.2.14 in its last sentence, to read:

“6.7.2.14.1” ... (last sentence) “Vents or pipes from the pressure-relief devices outlets, when used, shall deliver the relieved vapour or liquid to the atmosphere **without back pressure on the relieving device(s)**.”.

4. The current text, accepting a minimum back pressure on the relieving devices, is in contradiction with the second sentence of paragraph 6.7.2.15:

“... To ensure the escaping vapour is discharged unrestrictedly.”.

Proposal 3 (sub-section 6.7.2.13)

5. Insert a new sub-paragraph (f) in paragraph 6.7.2.13.1 just before the sentence preceding the existing sub-paragraph (f):

“(f) The cross sectional flow area of the pressure-relief device(s) in mm².”.

6. The expert from Spain proposes this addition because ISO 4126-1:2004 and ISO 4126-2:2004 prescribe the marking of flow area (cross sectional flow area) on pressure-relief device(s).

This minimal cross sectional area is used to calculate the theoretical flow capacity of spring loaded relief-device(s).

Consequently, the existing sub-paragraph (f) becomes sub-paragraph (g).

Proposal 4 (sub-section 6.7.2.15)

7. It is proposed to change the last sentence of paragraph 6.7.2.15 because the rated flow capacity marked on the spring-loaded device(s) should be no less than the required relief device capacity of the portable tank and, in this respect, the meaning of what is a protective device -which deflects the flow of vapour- is important; given as an example a protective metal housing able to be securely locked in closed position, placed on top of the portable tank, that contains inside (enclosed) the pressure-relief device(s) among other service equipments.

8. It is also necessary to have, according to the above-referred standard for safety valves, a verifiable procedure of the flow capacity which passes through the vents or openings of the protective devices, and which deflects the flow of vapour, because the cross-sectional area of the discharge vents or openings (see paragraph 6.7.2.14.1, the vents are also included for discharging the vapour) shall not be less than the flow area of the pressure relief device(s), to avoid the possibility of back pressure effects.

9. Because of the above-mentioned reasons and with the aim of having a verifiable procedure to check the required flow capacity of each portable tank during controls or inspections performed by authorized bodies or officers of the competent authority (MSC.1/Circ.1202 of 14 June 2006, point 5, of the International Maritime Organization (reproduced in informal document INF.3), the following amendment to paragraph 6.7.2.15.1 (last sentence) is proposed:

“6.7.2.15.1 ... Protective devices which deflect the flow of vapour, e.g. protective metal housings intended to be locked in closed position, on top of the shell, are permissible if they meet the two following conditions:

(a) These protective devices are provided with vents or openings for the escaping vapour having a cross-sectional area of discharge not less than the cross sectional flow area of the pressure relief-device(s);

(b) The required relief-device(s) capacity calculated as established in 6.7.2.12.2.1 or 6.7.2.12.2.2 and 6.7.2.12.2.3 is not reduced.”.

Justification

10. Regardless of the technical arguments stated above, we continue to observe, during controls done in international harbours, many cases of portable tanks equipped with protective metal housing, closed without openings or vents, or in some cases the area of these openings or vents are of a very small size. This makes them useless to ensuring the adequate rate of flow of escaping vapour to the atmosphere according to the characteristics of the portable tank.

Transitional measures

11. Portable tanks intended for the transport of substances of class 1 and classes 3 to 9, manufactured before 1 January 2014, do not need to comply with the requirements of 6.7.2.13 (f), concerning the marking of the pressure-relief device(s); and 6.7.2.15.1 (a), concerning protective devices which deflect the flow of vapour.
