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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

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Item 7 of the provisional agenda

**MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS
ON THE TRANSPORT OF DANGEROUS GOODS**

Amendment to paragraph 6.7.2.15

Transmitted by the expert from Spain

Introduction

1. The expert from Spain proposes to add a new paragraph to 6.7.2.15. This new paragraph intends to regulate relief devices of portable tanks having covers on top of the shell. This way, tanks with covers would ensure the same flow of vapour discharged than other portable tanks.

Proposal

2. Add a new paragraph to 6.7.2.15 that would read as follows:

“6.7.2.15 Siting of pressure-relief devices

6.7.2.15.1 Each pressure-relief device inlet shall be situated on top of the shell in a position as near the longitudinal and transverse centre of the shell as reasonably practicable. All pressure-relief device inlets shall under maximum filling conditions be situated in the vapour space of the shell and the devices shall be so arranged as to

ensure the escaping vapour is discharged unrestrictedly. For flammable substances, the escaping vapour shall be directed away from the shell in such a manner that it cannot impinge upon the shell. Protective devices which deflect the flow of vapour are permissible provided the required relief-device capacity is not reduced.

6.7.2.15.2 Arrangements shall be made to prevent access to the pressure-relief devices by unauthorized persons and to protect the devices from damage caused by the portable tank overturning.

6.7.2.15.3 When a closed protective metal housing is placed on top of the shell, that is, where the relief devices of the portable tank are located, this housing must have either side or upper opening(s). This (these) opening(s) is (are) to be located near the relief devices, and shall have suitable arrangements and a discharge area to ensure that the escaping vapour is discharged unrestrictedly and that the same flow of discharge is provided than that discharged by the relief device itself. The discharge area of the opening(s) shall not be less than three times the total discharge area of the relief-devices enclosed. Other means to allow vapour reliefs can be used whereas they have the same effectiveness, if these means are approved by the competent authority.”

Justification

3. A large number of portable tanks are equipped with relief devices within a box or a reservoir with upper covers in practice, in order to comply with paragraph 6.7.2.15.2 of the current text in the Model Regulations (protection of the devices and access prevention).

4. Finding portable tanks T1 to T22 carrying different substances alternatively is also usual. Substances carried are, for instance, Class 3 and flammable substances. Paragraph 6.7.2.15.1 says: “*the escaping vapour from the relief devices shall be directed away from the shell in such a manner that it cannot impinge upon the shell*”. In practice, no protective devices are provided in these tanks to deflect the flow of vapour into the right way to avoid the shell inside the box or reservoir.

5. Therefore, special openings must be established on the box or reservoir with upper cover of the portable tanks. These portable tanks must have a suitable cross sectional area which should be much larger than the cross sectional area of the relief devices. This should be done this way because there is a difference between the speed and the pressure of the vapour escaping through them.

6. Even when portable tanks are not loaded with flammable substances, the value of the cross sectional area of the openings should still be increased in relation to the value of the cross sectional area of the relief devices, because these values are what the relief device’s discharging capacity depends on.

7. This proposal can also be justified by the wording of the United States Code of Federal Regulations-49-Transportation. The text refers to the problem of the openings of the box or “protective housing” as follows:

179.500-8 Openings in tanks. 179.500-IO Protective housing

“(a) Safety devices, and loading and unloading valves on tanks shall be protected from accidental injury by approved metal housing, arranged so it may be readily opened to permit inspection and adjustment of safety relief devices and valves, and securely locked in closed position. Housing shall be provided with opening having an opening equal to twice the total discharge area of safety relief device enclosed”
