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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 FOR AMENDMENTS TO THE MODEL REGULATIONS
ON THE TRANSPORT OF DANGEROUS GOODS**

6.2.2.7 Marking of refillable UN pressure receptacles

Transmitted by the European Industrial Gases Association (EIGA)¹

Introduction

1. The marking of refillable UN pressure receptacles is detailed in paragraph 6.2.2.7. The Model Regulations include within the definition of pressure receptacle “bundles of cylinders”.
2. A bundle of cylinders is defined as “means of assembly of cylinders that are fastened together and which are interconnected by a manifold and transported as a unit. The total water capacity shall not exceed 3 000 litres except that bundles intended for the transport of gases of Division 2.3 shall be limited to 1 000 litres water capacity;”

¹ In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60 para. 100 and ST/SG/AC.10/34, para. 14).

Examples of a bundle of cylinders are shown below



Proposals

3. Within 6.2.2.7 there is a need to clarify the marking requirements for bundles as it requires the same markings to be applied as those on an individual cylinder which is inconsistent. As a result a number of recommendations are made to modify, 6.2.2.7, 6.2.2.7.1, 6.2.2.7.2 and 6.2.2.7.3. This is not intended to add any additional markings, and the individual cylinder markings will remain unchanged, and only clarifies what is already stated in the Model Regulations. The proposals are divided into four parts:

Part 1

4. In the first paragraph of 6.2.2.7, there is a reference to the diameter of the pressure receptacle. For a “bundle of cylinders”, the diameter reference does not apply as a “bundle of cylinders” does not have a diameter. Thus it is proposed to add to the first paragraph of 6.2.2.7, the following text.

“For bundles of cylinders, the individual cylinders shall be marked as required above, and the frame that retains the cylinders the minimum size of the marks shall be 5 mm and the UN packaging symbol shall be 10 mm.”

Part 2

5. In sub-section 6.2.2.7.2 (g) this does not adequately clarify the situation regarding the mass of the “bundle of cylinders”. In order to make this clearer, a new sentence at the end of 6.2.2.7.2 (g) is proposed which would add the specific requirements for a bundle of cylinders. The proposed modifications are in bold and underlined.

6.2.2.7.2:

- (g) The mass of the empty pressure receptacle including all permanently attached integral parts (e.g. neck ring, foot ring, etc.) in kilograms, followed by the letters “KG”. This mass shall not include the mass of valve, valve cap or valve guard, any coating, or porous material for acetylene. The mass shall be expressed to three significant figures rounded up to the last digit. For cylinders of less than 1 kg, the mass shall be expressed to two significant figures rounded up to the last digit. In the case of pressure receptacles for UN 1001 acetylene, dissolved and UN 3374 acetylene, solvent free, at least one decimal shall be shown after the decimal point and two digits for pressure receptacles of less than 1 kg. **For a bundle of cylinders this mass will include the frame of the bundle and all permanently attached parts (manifold and valve(s));**

Part 3

6. In sub section 6.2.2.7.2 (h) there is a requirement to mark the minimum wall thickness of the pressure receptacle in millimetres. As written it is not clear about the situation with bundles of cylinders. The individual cylinders in a bundle of cylinders all have their wall thickness marked on them, and the implication as written is that the assembly requires this as well. Thus the proposed wording to be added to the end of 6.2.2.7.2 (h) clarifies the situation. The proposed modifications are in bold and underlined.

- (h) The minimum guaranteed wall thickness of the pressure receptacle in millimetres followed by the letters “MM”. This mark is not required for pressure receptacles with a water capacity less than or equal to 1 litre or for composite cylinders or for closed cryogenic receptacles **or for a bundle of cylinders.**

Part 4

7. In 6.2.2.7.3 (m) there is a requirement to mark the identification of the cylinder thread. As will be noted the assembly of a bundle of cylinders does not have a cylinder thread as each cylinder has the thread marked on them, (it is not a pressure retaining part) and thus 6.2.2.7.3 is proposed to be modified. The proposed modifications are in bold and underlined.

“The following manufacturing marks shall be applied:

- (m) Identification of the cylinder thread (e.g. 25E). This mark is not required for closed cryogenic receptacles **or for a bundle of cylinders.**

Justification

8. These additions will clarify the marking of bundles of cylinders.

Safety

9. No safety implications foreseen.

Feasibility

10. No specific problem.

Enforceability

11. No difficulty in enforcement is envisaged.
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