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**AMENDMENTS TO CHAPTER 6.2 TO ALIGN THE MARKING
OF RECEPTACLES WITH THE PROVISIONS ADOPTED FOR CLASS 2 RECEPTACLES
IN THE UN MODEL REGULATIONS**

Transmitted by the European Industrial Gases Association (EIGA) */

SUMMARY

<i>Executive summary:</i>	The proposal provides text which updates the marking requirements for Class 2 receptacles in accordance with the text adopted by the UN Experts Committee for the 12 th Revision of the Model Regulations.
<i>Action to be taken:</i>	Amend 6.2.1.7 <i>Marking of receptacles</i> as indicated below.
<i>Relevant documents:</i>	ECE/TRANS/140 (Vol. II) TRANS/WP.15/AC.1/2001/33 ST/SG/AC.10/27/Add.1.

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Introduction

During the revision of the UN Model Regulations for Class 2 receptacles, the provisions for marking of receptacles were fundamentally reviewed and put in a more logical order. EIGA proposes to modify the provisions of 6.2.1.7 accordingly.

Proposal

Amend 6.2.1.7 as follows:

6.2.1.7 *Marking of refillable pressure receptacles*

Refillable pressure receptacles shall be marked clearly and legibly with certification and gas or pressure receptacle specific marks. These marks shall be permanently affixed (e.g. stamped, engraved, or etched) on the pressure receptacle. The marks shall be on the shoulder, top end or neck of the pressure receptacle or on a permanently affixed component of the pressure receptacle (e.g. welded collar).

(UN text with deletion of the references to UN certified pressure receptacles)

The minimum size of the marks shall be 5mm for pressure receptacles with a diameter greater than or equal to 140 mm and 2.5 mm for pressure receptacles with a diameter less than 140 mm.

(UN text)

6.2.1.7.1 The following certification marks shall be applied:

- (a) The technical standard (e.g. ISO 9809-1) used for design, construction and testing;
- (b) The character(s) identifying the country of approval as indicated by the distinguishing signs of motor vehicles in international traffic;
- (c) The identity mark or stamp of the inspection body that is registered with the competent authority of the country authorizing the marking;
- (d) The date of the initial inspection, the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/").

6.2.5.7.2 The following operational marks shall be applied:

- (e) The test pressure in bar, preceded by the letters "PH" and followed by the letters "BAR";
- (f) The empty mass of the 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 mass for acetylene. The empty 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;

- (g) 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;
- (h) In the case of pressure receptacles intended for the transport of compressed gases, UN 1001 acetylene, dissolved, and UN 3374 acetylene, solvent free, the working pressure in bar, preceded by the letters "PW";
- (i) In the case of liquefied gases, the water capacity in litres expressed to three significant digits rounded down to the last digit, followed by the letter "L". If the value of the minimum or nominal water capacity is an integer, the digits after the decimal point may be neglected;
- (j) In the case of UN 1001 acetylene, dissolved, the total of the mass of the empty receptacle, the fittings and accessories not removed during filling, the porous material, the solvent and the saturation gas expressed to two significant figures rounded down to the last digit followed by the letters "KG";
- (k) In the case of UN 3374 acetylene, solvent free, the total of the mass of the empty receptacle, the fittings and accessories not removed during filling and the porous material expressed to two significant figures rounded down to the last digit followed by the letters "KG".

6.2.1.7.3 The following manufacturing marks shall be applied

- (l) Identification of the cylinder thread (e.g. 25E);
- (m) The manufacturer's mark registered by the competent authority. When the country of manufacture is not the same as the country of approval, then the manufacturer's mark shall be preceded by the character(s) identifying the country of manufacture as indicated by the distinguishing signs of motor vehicles in international traffic. The country mark and the manufacturer's mark shall be separated by a space or slash;
- (n) The serial number assigned by the manufacturer;
- (o) In the case of steel pressure receptacles and composite pressure receptacles with steel liner intended for the transport of gases with a risk of hydrogen embrittlement, the letter "H" showing compatibility of the steel (see ISO 11114-1:1997).

6.2.1.7.4 The above marks shall be placed in three groups.

- Manufacturing marks shall be the top grouping and shall appear consecutively in the sequence given in 6.2.1.7.3.
- The middle grouping shall include the test pressure (e) which shall be immediately preceded by the working pressure (h) when the latter is required.
- Certification marks shall be the bottom grouping and shall appear in the sequence given in 6.2.1.7.1.

6.2.1.7.4 Other marks are allowed in areas other than the side wall, provided they are made in low stress areas and are not of a size and depth that will create harmful stress concentrations. Such marks shall not conflict with required marks.

6.2.1.7.5 In addition to the preceding marks, each refillable pressure receptacle shall be marked indicating the date (year and month) of the last periodic inspection and the registered mark of the inspection body authorized by the competent authority of the country of use.

6.2.1.8 Marking of non-refillable pressure receptacles

Non-refillable pressure receptacles shall be marked clearly and legibly with certification and gas or pressure receptacle specific marks. These marks shall be permanently affixed (e.g. stencilled, stamped, engraved, or etched) on the pressure receptacle. Except when stencilled, the marks shall be on the shoulder, top end or neck of the pressure receptacle or on a permanently affixed component of the pressure receptacle (e.g. welded collar). Except for the "DO NOT REFILL" mark, the minimum size of the marks shall be 5mm for pressure receptacles with a diameter greater than or equal to 140 mm and 2.5 mm for pressure receptacles with a diameter less than 140 mm. The minimum size of the "DO NOT REFILL" mark shall be 5 mm.

6.2.1.8.1 The marks listed in 6.2.1.7.1 to 6.2.1.7.3 shall be applied with the exception of (f), (g), and (l). The serial number (n) may be replaced by the batch number. In addition, the words "DO NOT REFILL" in letters of at least 5 mm in height are required.

6.2.1.8.2 The requirements of 6.2.1.7.4 shall apply.

NOTE: Non-refillable pressure receptacles may, on account of their size, substitute this marking by a label (see 5.2.2.2.1.2).

6.2.1.8.2 Other marks are allowed provided they are made in low stress areas other than the side wall and are not of a size and depth that will create harmful stress concentrations. Such marks shall not conflict with required marks.

Justification

Compared to the actual requirements, a number of markings have been added such as the standard to which the receptacle was constructed, the country of approval, the minimum wall thickness, the cylinder thread and the hydrogen compatibility.

On the other hand, the approval number was deemed superfluous in view of the other markings (manufacturer, serial number, technical standard, inspection body, date of initial inspection) allowing for a perfect traceability.
