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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

Thirtieth session  
Geneva, 4-12 (a.m.) December 2006  
Item 2(c) of the provisional agenda

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

Transmitted by the International Organization for Standardization (ISO)

This paper proposes changes to two of the existing ISO standard references in the Model Regulations. Both are minor changes necessitated by the revision of the standards.

**1. Provisions for labels**

A second edition of ISO 7225 "Gas cylinders - Precautionary labels" has been issued in 2005. The proposal is therefore aimed at updating the paragraph 5.2.2.2.1.2 which currently refers to the first (1994) edition of that ISO standard.

Proposal

Update paragraph 5.2.2.2.1.2 as follows:

“5.2.2.2.1.2 Cylinders for Class 2 may, on account of their shape, orientation and securing mechanism for transport, bear labels representative of those specified in this section, which have been reduce in size, according to ISO 7225:2005 "Gas cylinders -Precautionary labels", for display on the non-cylindrical part (shoulder) of such cylinders. Labels may overlap to the extent provided for by ISO 7225:2005, however, in all cases, the labels representing the primary hazard and the numbers appearing on any label shall remain fully visible and the symbols recognisable.”

**Justification**

The standard has been revised in the following aspects.

1. ISO 448:1981 is no longer referenced (Clause 2); instead, the *UN Recommendations* are referenced for label requirements in Clause 3.
2. Specific label and panel content in Clause 3 replaced with a reference to the *UN Recommendations*. Table 2 has been replaced with a new table (A.1) that provides more information (colour options and class numbers).
3. In Clause 4.3 more guidance is given on label location on cylinder.
4. The example showing a triangular arrangement of labels has been removed; new examples show the requirement for hazard class on all labels.
5. In Annex A the pictorial examples have been removed and replaced with a table which indicates division, subsidiary hazard, and required labels.

These changes align the standard with the Model Regulations and give the user more useful guidance on label content and positioning.

**2. Periodic Inspection of Seamless Aluminium Cylinders.**

At its last meeting the Sub-Committee of Experts on the Transport of Dangerous Goods agreed to adopt the 2005 editions of the three periodic inspection standards referenced in 6.2.2.4 of the Model Regulations (see ST/SG/AC.10/C.3/58 paragraphs 20 and 12). An amendment to the standard ISO 10461:2005 Seamless aluminium-alloy gas cylinders -- Periodic inspection and testing has been published since the submission of the previous proposal. This amendment gives more detailed advice on the limitations on temperatures when aluminium cylinders are heated, for example when curing paints or coatings.

**Proposal**

In the table in 6.2.2.4 replace the second line with:

ISO 10461:2005/A1:2006	Seamless aluminium-alloy gas cylinders -- Periodic inspection and testing
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**Justification**

Clause 14.2.2 'Painting and coating' of ISO 10461:2005 paragraph 4 states:

"Cylinders manufactured from heat-treatable aluminium alloys shall not be heated to temperatures exceeding 175 °C unless the cylinder manufacturer recommends otherwise. Only responsible organizations that can properly control heat input and record time and

temperature shall heat cylinders. The total cumulative time at temperatures between 110 °C and 175 °C shall be limited to the time recommended by the cylinder manufacturer. Cylinders heated in accordance with these provisions shall not require further testing.”

As a result of further discussions between manufacturers and users, this advice has been expanded by Amendment 1 to give the following more detailed guidance.

“For cylinders manufactured from heat-treated alloys with ageing, the following applies.

a) Below 150 °C:

No further precautions are required.

b) From 150 °C to 175 °C:

1) If a manufacturer’s recommendations (supported by time and temperature data) have been followed, and a controlled application of heat is used, e.g. in the curing of coatings, the cylinder need not be tested.

2) If a manufacturer’s recommendations have not been followed for a controlled application of heat, the cylinder requires mandatory testing. The cylinder shall pass the hydraulic pressure test after the application of heat. A sort test, e.g. hardness test, may be used before proceeding to a hydraulic test. The hydraulic test need not be performed if the sort test results in a failure, but in this case the cylinder shall be rendered unserviceable.

c) Above 175 °C:

In no case shall the cylinder be subjected to temperatures above 175 °C. If the cylinder is inadvertently subjected to a temperature in excess of 175 °C, the cylinder shall be rendered unserviceable unless it is requalified by passing the volumetric expansion test (see 11.3).”

ISO requests that this practical and detailed guidance is brought to the attention of users of the Model Regulations by adding Amendment 1 to the reference.

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