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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 2 of the provisional agenda

TRANSPORT OF GASES

Proposals to amend the requirements for marking refillable pressure receptacles
intended for the transport of acetylene

Transmitted by the European Cylinder Makers Association (ECMA)

Introduction

The requirements in the Model Regulations for marking the mass of pressure receptacles intended to transport acetylene have been reviewed against the latest development of the standard ISO 13796 and found to be less accurate than the ISO experts currently recommend. Proposals are made to increase the precision for marking the empty mass and tare mass of pressure receptacles intended for transporting acetylene in order to aid accurate filling. In particular, the number of significant figures for tare weights is increased from two to three and a minimum precision of 0.1 kg is required in all cases. This is necessary to guarantee safe handling and transport of acetylene cylinders.

Proposal

The following extract from the Thirteenth Revision of the Model Regulations shows the necessary additions underlined.

6.2.2.7.2 The following operational marks shall be applied:

- (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 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. In the case of UN 1001

acetylene, dissolved and UN 3374 acetylene, solvent free, at least one digit shall be shown after the decimal point;

- (k) 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~~ three significant figures rounded down to the last digit followed by the letters "KG". At least one digit shall be shown after the decimal point. For cylinders of less than 1 kg, the mass shall be expressed to two significant figures rounded down to the last digit;
- (l) 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~~ three significant figures rounded down to the last digit followed by the letters "KG". At least one digit shall be shown after the decimal point. For cylinders of less than 1 kg, the mass shall be expressed to two significant figures rounded down to the last digit.

Justification

Safety will be improved by the greater precision required by these proposals and no problems are foreseen with enforcement. The Model Regulations will be in accord with the recommendations of the experts from ISO who have a safety concern if tare weights of acetylene cylinders are stamped to two digits only.
