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**COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS**

**Sub-Committee of Experts on the
Transport of Dangerous Goods**
(Eighteenth session, 3-14 July 2000,
agenda item 5 (c))

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

Limited quantity

Proposal to amend chapters 3.4 and 5.3 limited quantities

Transmitted by the experts from Germany and Sweden

Introduction

The Australian document ST/SG/AC.10/C3/1999/56 contained among others a proposal to amend Chapter 3.4 - Limited Quantities for placarding of transport units with dangerous goods in limited quantities above a certain limit.

In principle the experts from Germany and Sweden are sympathetic to this Australian proposal.

As mentioned in the Australian paper large quantities of dangerous goods packaged in relatively small packages can be transported with little or no control and with little or no information for the fire brigade and the municipalities. On the other hand a transport unit or a package containing dangerous goods can only, contain a very small amount of said goods. These two extremes show the need for a certain limit for when to mark the transport unit.

In other international fora for regulations for the transport of dangerous goods, several proposals have dealt with the problem, amongst them:

- An Argentinean document to the IMO DSC (DSC 5/3/12) proposed a revision of paragraph 5.3.3.2.1.4 of part 5 of the IMDG Code so that all transport units containing dangerous goods are marked with the UN-number, irrespective of any weight limit. In document DSC 5/3/15 Argentina also proposes that a “maximum consignment quantity” should be introduced for the transport of dangerous goods in limited quantities but in large consignments.
- An ADR/RID ad hoc working group held in Bonn 11-13 January 1999 discussed the introduction of requirements for labelling of vehicles. Several European countries participated. The result from this meeting was a proposal to be put to the Joint Meeting of the RID Safety Committee and the Working Party on the Transport of Dangerous Goods to introduce regulations stipulating that vehicles/wagons carrying packaged dangerous goods under the same UN number in quantities exceeding 10 000 kg gross mass at the point of loading, except for classes 1 and 7 (for which requirements for labelling already exists), and where the vehicle/wagon was loaded at a single point shall bear the same labels as those required to be affixed to the packages. Additionally the vehicles/wagons may have the UN number displayed in black digits either against a white background or against an orange coloured panel. The latter to also allow for the UN/IMDG requirements on placarding and marking of transport units.

Some transport modes have requirements for marking the transport unit containing limited quantities of dangerous goods. According to the IMDG Code the transport unit must be marked with the words LIMITED QUANTITY if it contains dangerous goods in limited quantities, irregardless of the total amount of limited quantity packages.

According to ADR, except in the event of the carriage of dangerous goods in limited quantities according to marginals 10010 and 10 011, vehicles must be marked with orange coloured plates if they contain dangerous goods above this limit. The quantities referred to in marginal 10 011 vary for different chemicals between 20 kg/l to 1000 kg/l.

The experts from Germany and Sweden are of the opinion that the marking/placarding system for limited quantities must be easy to implement in practice. To avoid practical problems for operators in parcel services, local distribution etc., the transport unit should only be marked/placarded if it contains dangerous goods in limited quantities above a certain set amount.

According to 5.3.2.1.2 in the UN Model Rule, and 7.3.3.3.4 in the IMDG-Code the orange coloured rectangular panel mentioned above for displaying the UN-number shall be not less than 120 mm high and 300 mm wide. According to ADR and RID the orange coloured panel must be at least 400 mm wide and not less than 300 mm high. It can be seen that the possibilities already exist in these regulations to use an orange coloured plate to show that the transport unit contains dangerous goods.

Justification

The complaints from the various concerned parties e.g. fire brigades, regulators for transport in tunnels etc. show that there is a need for placarding transport units carrying limited quantity packages of dangerous goods above a certain level, whether fully or partially loaded.

The marking would allow the fire brigade and others to be instantly made aware that the transport unit contains dangerous goods in limited quantities above a certain amount.

Therefore the experts from Germany and Sweden are of the opinion that, in line with the Australian proposal, the transport unit should be placarded/marked if it contains dangerous goods of limited quantities above a certain set amount. For example, the limit could be set to 2000 kg/ L.

However it seems not to be reasonable to require full placarding as it is proposed in the Australian document. Instead the placarding system for limited quantities must be easy to use. That means it should be a single placard preferable one that is already used in the international transport of dangerous goods.

Therefore it could be an orange rectangular panel which is already used in the UN Recommendations (5.3.2.1.2), the IMDG-Code (7.3.3.3.4) and ADR (10 500) as specified in ADR 10 500.

Proposal

Add a new 3.4.8 to read “Transport unit shall be marked according to 5.3.2.3.”

Renumber 3.4.8 as being adopted in ST/SG/AC10/C3/34/Add 2 to 3.4.9 and the existing 3.4.8 to 3.4.10.

Add a new 5.3.2.3 to read “Special provisions for limited quantities”

"5.3.2.3.1 Transport units carrying dangerous goods in limited quantities [of 2 000 kg/L gross or more] shall, on each side and on each end, bear a rectangular reflectorized orange coloured plate of 40 cm base and not less than 30 cm high set in a vertical plane. The plates shall have a black border not more than 15 mm wide. They shall be clearly visible.

Other suitable placards or markings could be used as alternatives to the orange coloured plate.

5.3.2.3.2 The colour of the orange plates in conditions of normal use should have chromaticity co-ordinators lying within the area on chromaticity diagram formed by joining the following co-ordinates

chromaticity co-ordinators of points at comers of the area on the chromaticity diagram				
X	0,52	0,52	0,578	0,618
Y	0,38	0,40	0,422	0,38

Luminance factor of reflectorized colour $\beta > 0,12$

Reference centre E, standard illuminant C, normal incidence 45° , viewed at 0°

Co-efficient reflex luminous intensity at a single angle of illumination of 5° viewed at $0,2^\circ$. not less than 20 candelas per lux per m^2 . "
