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Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods**

Bern, 21–25 March 2011

Item 5 (b) of the provisional agenda

Proposals for amendments to RID/ADR/ADN: new proposals**Modification of special provision 653 in Chapter 3.3 in
RID/ADR/ADN****Transmitted by the Government of Sweden^{1, 2}***Summary*

Executive summary: Increase the maximum test pressure capacity product from 15 MPa.litre (150 bar.litre) to 15.2 MPa.litre (152 bar.litre) for the carriage of UN No. 1013 CARBON DIOXIDE, in cylinders mainly used for carbonating tap water in private households and for UN No. 1066 NITROGEN, in special provision 653 in RID/ADR/ADN.

Action to be taken: Amend the beginning of special provision 653.

Related documents: ECE/TRANS/WP.15/AC.1/2007/40 and informal document INF.34 presented to the Joint Meeting in Bern, 25-28 March 2008

ECE/TRANS/WP.15/AC.1/110

¹ In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para.106, ECE/TRANS/2010/8, programme activity 02.7 (c)).

² Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2011/12.

Background

1. In RID/ADR/ADN 2009, special provision 653 exempts small carbon dioxide (CO₂) cylinders below 0.5 litre from the provisions if certain conditions are met.
2. At the Joint meeting in March 2008, EIGA proposed to amend special provision 653 in that sense that if the product of test pressure and volume of the cylinder does not exceed 250 bar.litre, transport of UN No. 1013 was excluded from other provisions in RID/ADR/ADN. This proposal was discussed together with avalanche air bag cylinders that EIGA also wanted to be excluded from some of the provisions.
3. The result from the meeting was that special provision 653 was amended as follows (extract from the report):

Amend the beginning to read as follows:

"The carriage of this gas in cylinders having a test pressure capacity product of maximum 15 MPa.litre (150 bar.litre) is not subject ...".

In the fifth indent, replace "marked with "UN 1013"" with "marked with "UN 1013" for carbon dioxide or "UN 1066" for nitrogen, compressed".
4. This entered into force in RID/ADR/ADN on 1 January 2011.

Problem

5. A lot of the cylinders for UN No. 1013 carbon dioxide, used mainly for carbonating tap water in private households, are widely used around Europe. They are marked with a volume of 0.605 litre. This volume is measured without safety valve, but with the valve fitted the volume is 0.595 litre. Markings of such refillable pressure receptacles shall be in accordance with sub-section 6.2.3.9.
6. If the lower volume (0.595 litre) is applied, the limit 150 bar.litre is not reached and the gas receptacle can be transported according to special provision 653. However, the bottles are marked with 0.605 litre and with the test pressure PH 250 bar. This gives a product of 151.25, i.e. slightly above the limit of 150 bar.litre.
7. Sweden has received information that the number of bottles in service are in:

Scandinavia	3 million
Germany	25 million
France	10 million
Benelux	2 million
Italy + other countries	5 million
8. Sweden is of the opinion that, if the Joint Meeting decided in 2008 to exclude cylinders having a test pressure capacity product of maximum 150 bar.litre, it would be preferable also to include these slightly larger cylinders. This would reduce the costs for the households without reducing the safety in a significant way.

Proposal

9. In special provision 653, at the beginning, replace "of maximum 15 MPa.litre (150 bar.litre)" with "of maximum 15.2 Mpa.litre (152 bar.litre)".

Justification

10. The proposal does not change the current situation in any significant way for the carriage of either UN No. 1013 carbon dioxide or UN No. 1066 nitrogen, compressed, and no adverse effects on safety are to be expected.
