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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

Geneva, 13–17 September 2010

Item 5 a) of the provisional agenda

Proposals for amendments to RID/ADR/ADN – Pending issues

Chapter 3.2 and 3.4 – Introduction of a new special provision for the carriage of gas tanks and gas storage systems removed from motor vehicles powered by gases of UN numbers 1011, 1049, 1075, 1954, 1965, 1966, 1969, 1971 or 1978

Transmitted by the Government of Germany^{1,2}

¹ In accordance with the programme of work of the Inland Transport Committee for 2006-2010 (ECE/TRANS/166/Add.1, programme activity 02.7 (c)).

² Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2010/40.

Summary

Explanatory summary: In connection with the development and commercial launch of alternative vehicle propulsion systems, there is an increasing use of vehicles powered by flammable gases. In the context of maintenance and repair work, quality assurance activities for vehicles and their components and environmentally friendly disposal, used gas tanks or gas storage systems with different degrees of filling have to be carried. The existing provisions do not offer the possibility of carrying such gas tanks properly and in accordance with the law.

Action to be taken: Introduce a new special provision on the carriage of used gas tanks and gas storage systems.

Related documents: Document OTIF/RID/RC/2010/19 (ECE/TRANS/ WP.15/AC.1/2010/19), informal documents INF.19 and INF.48 from Germany as well as the report of the last Joint Meeting OTIF/RID/RC/2010-A (ECE/TRANS/WP.15/AC.1/118), paragraphs 57 and 58.

Introduction

1. At the last Joint Meeting (Bern, 22 to 26 March 2010) Germany proposed to draft requirements for the carriage of gas tanks of vehicles powered by liquefied petroleum gas, liquefied natural gas or hydrogen [see also document OTIF/RID/RC/2010/19 (ECE/TRANS/WP.15/ AC.1/2010/19) and informal documents INF.19 and INF.48 from Germany as well as the report of the last Joint Meeting OTIF/RID/RC/2010-A (ECE/TRANS/WP.15/AC.1/118), paragraphs 57 and 58].
2. The German proposal was favourably received. Several comments made during the meeting were incorporated in informal document INF.48. The delegates, however, asked for extra time in order to examine the proposed requirements.
3. In order to solve this rather urgent problem and to avoid different individual derogations on a national level, the delegates were asked to communicate all possible additional comments to the German representative, so that he could work out a multilateral agreement. Furthermore, Germany announced to submit an official document containing the revised proposal to the next Joint Meeting.
4. In the meantime Germany has received further comments which have been integrated into ADR multilateral agreement M217.

Proposal

5. According to the text of ADR multilateral agreement M217, Germany proposes the following amendments to RID/ADR/ADN:
6. Chapter 3.2, Table A
For UN-numbers 1011, 1049, 1075, 1954, 1965, 1966, 1969, 1971 and 1978, add special provision xxx to column (6).

7. Chapter 3.3

Add the following new special provision xxx:

"xxx Gas tanks or gas storage systems from motor vehicles powered by gases of UN Nos. 1011, 1049, 1075, 1954, 1965, 1966, 1969, 1971 or 1978, may be carried, provided the following conditions are met:

- (a) The gas tanks or gas storage systems shall be approved for operation in motor vehicles in accordance with the applicable provisions and meet the requirements of the relevant ECE Regulation No. R 67, R 110 or R 115 or the Regulations of the European Union concerning hydrogen vehicles.
- (b) The gas tanks or gas storage systems, and any fittings, shall be leakproof and shall not exhibit any signs of external damage.
- (c) If the receptacles are not leakproof or if they exhibit damage that could affect their safety, they shall only be carried in pressure-resistant containments approved by the competent authority and designed for a capacity and test pressure of not less than the capacity and 150% of the working pressure of the gas tanks or gas storage systems. In the case of liquefied gases, the containment shall be approved for a test pressure of not less than the test pressure stipulated for the stored gas in packing instruction P 200 in 4.1.4.1 of RID/ADR.
- (d) All openings, with the exception of pressure relief devices, shall be so closed as to be gas-tight.
- (e) During carriage, the filling quantity in the gas tank shall not exceed the maximum allowable working pressure at 15 °C or the filling ratio as given in packing instruction P 200.
- (f) Gas tanks with or without other pressurised external attachments shall be packed individually or together in such a way as to prevent damage to the valve and unintentional release of the gas under normal conditions of carriage.
- (g) Gas tanks with an internal valve and without other pressurised external attachments may also be carried unpackaged in pallet cages, on load carriers or on pallets. If transport pallets are used, it shall be ensured that the dimensions of the pallet exceed those of the gas tanks at each point by at least 5 cm and that there is no mechanical damage to the surface of the gas tank. The gas tanks shall be secured in the pallet cage, on the load carrier or on the transport pallet so as to prevent slipping, rolling or vertical movement.
- (h) Gas tanks with external valves or with pressurised external attachments shall be packed in pallet cages, on load carriers or in protective frames and meet the provisions of 4.1.6.8 (b) or (c).

Where the gas tanks are packed in frames or protective boxes according to 4.1.6.8 (d) or (e), the packing unit as presented for carriage shall be capable of withstanding a drop test from 1.8 m without breaking off the valve or pressurised external attachments and without release of the contents of the gas tank.

The drop test to be performed on the packing unit shall meet the testing requirements for boxes in accordance with 6.1.5.3, which each gas tank contained in the packing unit filled with a mass of water equivalent to its maximum gross mass of gas.

The carrier shall make available the evidence of successful completion of this test on request.

The competent authority of the country in which a gas tank in an overpack, in the sense of a packing unit as presented for carriage, is to be used for the first time shall be informed of the results of the drop test before the gas tank is carried for the first time. The report on the performance of the test shall be submitted to the authority for this purpose.

(i) If several gas tanks are consigned in a pallet cage, on a load carrier, in a protective frame or on a pallet, only the markings and danger labels required in accordance with Chapter 5.2 need to be affixed to the packing unit.

(j) Documentation

Every consignment that is carried in accordance with this special provision shall be accompanied by a transport document in accordance with RID/ADR/ADN 5.4.1, containing at least the following information:

- The UN number of the gas contained in the gas tank, preceded by the letters “UN”;
- The proper shipping name of the gas;
- The label model number;
- Quantity and description of the gas tanks or gas tank systems;
- The nominal capacity of each gas tank or, in the case of gas tank systems, the nominal capacity of each individual tank;
- The names and the addresses of the consignor and the consignee;
- An indication that this special provision is being applied.

Example: “UN 1971 natural gas, compressed, 2.1, 1 gas tank of 50 l, 1 gas tank OF 35 L, SPECIAL PROVISION XXX. ”.

k) The other provisions of RID/ADR/ADN shall be observed. ”

Justification

8. See document OTIF/RID/RC/2010/19 (ECE/TRANS/WP.15/AC.1/2010/19).
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