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INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods

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Working Party on the Transport of Dangerous Goods

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Item 5 of the provisional agenda

TANKS

6.8.4, Special Provision TT8

Proposal transmitted by the International Union of Private Wagons (UIP)^{1, 2}

Proposal

1. In Special Provision TT8 in 6.8.4, it is proposed to amend the text as follows (new text underlined):

"TT 8 Tanks ~~approved~~ used* for the carriage of UN 1005 AMMONIA ANHYDROUS and constructed of fine-grained steel with a yield strength of more than 400 N/mm² in accordance with the material standard, shall be subjected at each periodic test according to 6.8.2.4.2, to magnetic particle inspections to detect surface cracking.

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/2009/18.

For the lower part of each shell at least 20% of the length of each circumferential and longitudinal weld shall, together with all nozzle welds and any repair or ground areas, be inspected. ".

Footnote* would read as follows:

* Tanks for which the product UN No. 1005 AMMONIA, ANHYDROUS, is shown both in the product list in the type approval and on the tank plate. In the event that the substance is removed from the tank plate between two periodic tests, a corresponding entry must be made in the tank record in order to ensure that the magnetic particle inspection to detect surface cracking is again carried out for the last time at the following periodic test."

Justification

2. It is known that surface cracks can appear on tanks made of fine-grained steel with a yield stress of more than 400 N/mm² when product UN 1005 ammonia, anhydrous is used. RID/ADR 6.8.4, special provision TT 8 therefore stipulates that by derogation from the rule these tanks must undergo a magnetic particle inspection according to RID 6.8.2.4.2 during each periodic test.

3. Special provision TT8 stipulates that all tanks made of these materials and which are approved for product UN 1005 ammonia, anhydrous (contained in the product list) must be checked. However, as the risk of surface cracks only applies to tanks which are also used to transport UN No. 1005 ammonia, anhydrous (contained in the product list and on the tank plate), UIP believes the text must be amended.

4. Tanks for transporting UN No. 1005 ammonia are almost identical in construction to other LPG tanks. These tanks are also therefore always approved for the usual range of LPG products, and owing to the market situation, are mostly used only to transport these gases. UN 1005 ammonia accounts for only a small volume of transport. It is important to note that NH₃ may only be carried in tanks which include this product on the tank plate as well as in the type approval certificate.

5. As regular magnetic particle inspection of a tank clearly also involves considerable cost but is only technically advisable if tanks actually transport ammonia, the UIP is proposing the above amendment to the text.

6. It would therefore only be necessary to carry out regular magnetic powder tests on tanks which are susceptible to surface cracks due to their use with the ammonia product. These tanks are clearly identifiable by the product list on the tank plate.
