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Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods

Bern, 21-25 March 2011

Item 2 of the provisional agenda

Tanks

Additive devices on tanks

Proposal transmitted by the European Conference of Fuel Distributors (ECFD)^{1, 2}

Summary

Executive summary: To ensure the safe operation of petroleum tanks for UN No. 1202 DIESEL FUEL or GAS OIL or HEATING OIL, LIGHT (special provisions 640K, 640L and 640M) [and for UN No. 1203 GASOLINE or MOTOR SPIRIT as well as for UN No. 1223 KEROSENE], equipped with additive devices, the minimum technical safety requirements for these elements of the service equipment of tanks as part of the emptying devices should be observed.

Decision to be taken: Addition of a transitional provision for additive devices that have been constructed and approved before 1 July 2013 in conformity with national rules. Addition of a new note after the heading of Chapter 6.8.

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/2011/3.

Summary (cont'd)

Related documents: ECE/TRANS/WP.15/AC.1/2010/14;
ECE/TRANS/WP.15/AC.1/118/Add.1, paragraph 22
ECE/TRANS/WP.15/AC.1/2010/39 and informal document INF.10
of the September 2010 Joint Meeting
ECE/TRANS/WP.15/AC.1/120, paragraph 37 and Add.1

Introduction

1. The Working Group on Tanks of the Joint Meeting (Bern, 22–26 March 2010) discussed in detail the proposals in document ECE/TRANS/WP.15/AC.1/2010/14 with a view of including provisions on additive devices in the regulations, and considered their feasibility. On that occasion, it was unanimously acknowledged that the provisions were necessary because those systems, which were mounted on petroleum tanks, were already widely used. Before the subject was considered further, the issues raised should nevertheless be clarified in a reworded proposal. For this reason, these issues have been dealt with in document ECE/TRANS/WP.15/AC.1/2010/39 as well as in informal document INF.10 submitted by ECFD at the September 2010 session.

2. Against this background, the Joint Meeting Working Group on Tanks (Geneva, 13–15 September 2010) has broadly discussed the documents submitted by ECFD. A definition in 1.2.1 as well as minimum technical safety requirements for additive devices to be included in a special provision TE in Section 6.8.4 b) were not supported by the majority. The additive devices should rather be defined as part of the tank equipment. These devices would then be integrated into the tank approval and would hence be subject to the initial and periodic inspections as well as to intermediate and extraordinary inspections. The Working Group on Tanks agreed that the definition and the minimum technical safety requirements of additive devices should be settled in a special provision under Section 3.3.1 assigned to UN No. 1202 and according to proposals of the Working Group on Tanks also to UN Nos. 1203 and 1223 in column (6) of Table A. To this purpose, the Working Group on Tanks proposed a provisional text in document ECE/TRANS/WP.15/AC.1/120/Add.1, whereupon the Joint Meeting asked ECFD to submit a new proposal with revised wording. In compliance with this request, ECFD came up with the following text.

Proposal

3. Chapter 1.6

Add a new transitional provision to read as follows:

"1.6.3.x / 1.6.4.y

Additive devices according to special provision XYZ constructed and approved before 1 July 2013 in accordance with national regulations, but which do not, however, conform to the requirements of special provision XYZ applicable as from 1 January 2013, may still be used."

4. Chapter 3.2

Table A

For UN Nos. 1202[, 1203 and 1223], add in column (6): "XYZ".

5. Chapter 3.3

3.3.1 Add a special provision XYZ to read as follows:

"XYZ Additive devices means permanently fixed elements of the tank equipment for dispensing additives (dangerous goods) of UN Nos. 1202, 1993 and 3082 [or not dangerous goods] into the emptying device of tanks during discharge. The additive device is permanently connected to the emptying device of the tank and consists of one or more storage receptacle(s) of a maximum individual capacity of [120] litres for a maximum of [4] receptacles, the necessary dispensing and dosing devices and connecting lines.

The manufacturer shall technically make sure that there can be no back-flow when dispensing additives into the emptying device of the tank during discharge.

The storage receptacle of an additive device is either:

- a) Permanently fixed on the outside of the tank; or
- b) An integral part of the tank itself; or
- c) Separable from the tank equipment.

Storage receptacles on the outside of the tank shall be positioned in such a way on the tank-wagon/tank-vehicle or tank-container that they are protected against damage during carriage.

Storage receptacles which are permanently fixed on the outside of the tank shall be made of a metallic material and must comply with the following minimum wall thickness requirements:

<i>Material</i>	<i>Minimum wall thickness</i>
Austenitic stainless steels	2.5 mm
Other steels	3 mm
Aluminium alloys	4 mm
99.80 % pure aluminium	6 mm

[The sides of these receptacles may be without radiuses or curvatures. Welding seams must be carried out in accordance with rules of technology.]

Storage receptacles which are permanently fixed on the outside of the tank must be equipped with ventilation devices, where appropriate, with a flame arrester (if the flashpoint of the additive does not exceed 60 °C) and a protection against leakage of contents during turnover. The test pressure of these receptacles must be at least 0.3 bar.

Receptacles that are an integral part of the tank itself shall be arranged according to the construction requirements for tanks in Section 6.8.2.

Storage receptacles that can be separated from the tank (swap body), i.e. that have to be connected to the dispensing and dosing devices and connection lines of the additive devices, must be [metallic] packaging in accordance with Chapter 6.1 [and require no further approval. This requirement does not apply if the additives are not dangerous goods]. These storage receptacles may only be connected during discharge of the tank. During carriage, the connection device

must be tightly sealed and the storage receptacle (swap body) must be carried separately as a package.

[Carriage of additives within the above mentioned storage receptacles does not affect the orange-coloured plate marking according to 5.3.2.1.6.]

6. Chapter 6.8

[Change the existing Note after the heading of Chapter 6.8 into Note 1.

Add a new Note 2 to read as follows:

"NOTE 2: For tanks with additive devices see special provision XYZ."]

Justification

7. Special provision XYZ complies basically with the proposal and the discussions of the Joint Meeting Working Group on Tanks (Geneva, 13–17 September 2010). Furthermore, it includes several additional proposals made during the plenary session of the Joint Meeting by:

- Switzerland: integration of additives that cannot be classified as dangerous goods, acceptance of existing design type approvals for packaging when connected as swap body to an additive device;
- France: limitation of the maximum individual capacity of storage receptacles at 120 litres;
- Netherlands: integration of a reference to special provision XYZ in Chapter 6.8.

8. The Austrian proposals to introduce a separate documentation and marking of additive devices and to mention the additive in the transport document have not been supported by a majority of ECFD members, and have therefore been rejected. Any other additional proposals have been added in square brackets.

9. Furthermore, it is proposed to allow a maximum of 4 storage receptacles (each of a maximum individual capacity of 120 litres – proposal of France), thus permitting a complete additivation (even in the case of more than one type of additives) of the entire content of a full tank (also with regard to the maximum quantities) during discharge.

10. A transitional provision takes into consideration that those systems, which are mounted on petroleum tanks, are already widely used and that a basis for their continuing utilisation should be established.
