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TANKS

Additive systems on tanks for UN 1202 heating oil, light

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

Summary

To ensure the safe operation of petroleum tanks for UN 1202 heating oil, light (special provisions 640K, 640L and 640M) equipped with additive systems as additional attachments, the minimum technical safety requirements for the service equipment in the product delivery system on these petroleum tanks should be observed. In addition, requirements for the marking and labelling of storage tanks for additives are proposed (where the additives are dangerous goods within the meaning of RID/ADR).

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/2010/14.

Background

1. UN 1202 heating oil, light, is usually delivered to consignees (e.g. the consumer) in tanks. For a long time, additives have been added to the heating oil in order to have a specific influence on various properties of the substance. To avoid having to carry additives in small containers, technical solutions were developed so that the additive could be carried on the tank in such a way that it could be added to the heating oil to be delivered as the need arises (and if the customer so wishes) when the oil storage tank is being filled. Various tank and tank equipment manufacturers therefore developed additive systems that are linked to the system for delivering the product from the tank (see illustration).



Illustration: modern additive system in the delivery system of a heating oil tank-vehicle

Proposal

2. The term “additive system” should be defined in 1.2.1 and the minimum technical safety requirements should be dealt with in a TE special provision for equipment which can be assigned to UN No. 1202 in Table A. The storage container for additives should bear the appropriate UN number and danger labels (if the additives are dangerous goods within the meaning of RID/ADR).

3. **1.2.1** Insert a new definition as follows:

""**Additive system**" means an additional fixed element of the service equipment of tanks in the delivery system which mix so-called additives with the product to be delivered during the filling of storage tanks. An additive system generally consists of a storage container with a maximum capacity of 450 litres and the necessary dispensing and dosing devices.".

4. **Table A**

For UN No. 1202 (all entries), insert "TExy" in column (13).

5. **6.8.4 (b)** Insert a new special provision to read as follows:

"**TExy** If the service equipment of a tank is fitted with an additive system, the minimum technical safety requirements (materials, minimum wall thickness, test pressure) shall be observed for the construction of the storage tank. In particular, the provisions of 6.8.2.2 and 6.8.2.4 shall be observed for the entire additive system as additional fixed elements of the service equipment of tanks in the delivery system.

The storage containers themselves may be installed in the tank in accordance with the provisions of 6.8.2 and 6.8.5 concerning the construction of tanks, or outside the tank. If the storage containers are fitted outside the tank, a distinction shall be made as to whether they are connected permanently to the dispensing and dosing system or whether they can be disconnected. Permanently connected storage containers shall meet the packaging provisions of 6.1.1 and 6.1.4, subject to the material compatibility of the additive, and shall be tested at a test pressure of not less than 0.3 bar. Storage containers which must be connected to the dispensing and dosing system shall be considered as packagings within the meaning of Chapter 6.1.

The marking and labelling of additive system storage containers visible from outside the tank shall be the same as for packagings in accordance with 5.2.1 and 5.2.2. Carriage of an additive shall not affect the marking of the tank in accordance with 5.3.2.1.4 and 5.3.2.1.6.".

Justification

6. Inconsistent requirements for additive systems in the various OTIF Member States/ADR Contracting Parties, defects that have come to light and the competent authorities' threat to prohibit the carriage of such tanks require that for tanks carrying heating oil, regulations be developed for the minimum technical safety requirements for additive systems and the associated provisions (independent marking and labelling of the storage container for the additive).
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