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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, 19-23 March 2012

Item 2 of the provisional agenda

##### Tanks

### Chapter 6.10 Vacuum-operated tanks

#### Devices to prevent immediate passage of flame in pumps which may create sparks – alternative solutions

Transmitted by the Government of Germany<sup>1, 2</sup>

#### Introduction

1. In practice, vacuum-operated waste tanks often do not meet the requirements of RID/ADR 6.10.3.8 (b).
2. 6.10.3.8 (b) requires devices to prevent immediate passage of flame in pumps which may create sparks. With the rotation piston pumps usually used, the creation of sparks is in principle possible if the pump malfunctions. As a consequence of these potential sources of ignition, devices to prevent immediate passage of flame must be used, i.e. flame traps.
3. For several reasons, these flame traps are not technically a good idea for vacuum-operated waste tanks (risk of contamination, reduced passage of air, ...); in practice they are dismantled or are made inoperable. The protective aim cannot therefore be met.
4. The requirements of RID/ADR Chapter 6.10 do not cover alternative solutions, such as the explosive pressure shock proof construction of tanks and the pieces of equipment

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<sup>1</sup> 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)).

<sup>2</sup> Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2012/2.

attached to them, such as pipework, apparatus and fittings. It is therefore proposed to take over the alternative rule that applies to tanks according to Chapter 6.8 for vacuum-operated waste tanks as well, and also to replace the expression "creation of sparks" with the more suitable term "source of ignition".

## Proposal

5. Amend RID/ADR 6.10.3.8 (b) to read as follows:

"(b) A device to prevent immediate passage of flame shall be fitted to both the inlet and outlet of a vacuum pump/exhauster with a **possible source of ignition** and which is fitted on a tank used for the carriage of flammable wastes **or the tank and its equipment shall be capable of withstanding, without leakage, an explosion resulting from the passage of the flame (explosion-pressure shock proof).**"

## Justification

6. The proposed amendment would mean such vacuum-operated tanks could be equipped safely in a technically feasible way in accordance with the regulations.

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