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ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSORT COMMITTEE

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Safety Committee and the Working Party on the Transport of Dangerous Goods
(Geneva, 1 - 10 September / 13 – 17 October 2003)

Chapter 6.8
Subclause 6.8.4

Transmitted by the Government of the Netherlands

Summary:
TE6 and, until 2005 TE14 of subclause 6.8.4 (special provisions) contain a requirement about pressure-release devices which, from a technical point of view is, in the opinion of the Netherlands, not quite understandable and probably unnecessary limiting. Application of this requirement, together with the interpretation of the tank code is giving problems, particularly for ADR tank vehicles for the carriage of a number of highly viscous substances.

Action to be taken:
Discuss the following in the Tank Working Group: amendment of TE6 of subclause 6.8.4 and interpretation of letter V in the tank code.

Reference documents:
TRANS/WP.15/AC.1/92/Add.1

Introduction:

A limited number of substances with the common properties high temperature and molten, (UN 2304, naphthalene, molten, UN 2448 sulphur, molten and UN 3176, flammable solid, molten, organic, n.o.s. of class 4.1 and UN 3257, elevated temperature liquid of class 9) have similarities in the tank code: LGBV or LGAV and Special Provisions (TE6, TE14). Where these codes usually provide sufficient information to specify the tank construction and equipment, this is however not the case for these substances. The aspects, which are particularly giving problems in their application, are:

1. TE6 (and TE14): “tanks may be equipped with pressure release devices opening automatically inwards or outwards under the effect of a difference of pressure of between 20 kPa and 30 kPa (0.2 and 0.3 bar).”; and
2. The constructional features of the equipment, indicated by the letter V in the tank code.

Ad 1.:
- Particularly for tank vehicles, which spray bitumen on roads, the tank is box shaped, which is authorised according to Table A of 3.2 to tank code LGAV. These tanks can, in principle, not withstand an underpressure inside the tank of 0,2 to 0,3 bar;
- The requirement in TE6 (and TE14) suggests that the pressure release device is a valve. Due to the properties of the bitumen however, valves become easily clogged and so fail to protect the tank as intended;
- The limiting of the opening pressure, inwards and outwards, between 0.2 and 0.3 bar does not seem to have a practical justification.

Ad 2.:
- The fact that the devices as described in TE6 (TE14) may be fitted, implies that the tank may also not be equipped with safety devices, which gives reason to protect the tank in another way;
- according to 4.3.4.1.1, letter V in the tank code stands for: “tank with a venting system, according to 6.8.2.2.6, etc.”;
- 6.8.2.2.6 says: “Tanks, intended for the carriage ……shall have a venting system and a safety device to prevent the contents from spilling out if the tank overturns;….”;
- beside the most common and well known application for petrol tanks, the very general description of “venting device” and “safety device” could be interpreted as, for instance, labyrinth venting devices for highly viscous substances as specified above.

Proposal:

Application of the requirements of ADR/RID in a practical way to tanks for the carriage of these substances can be achieved if:
- the meaning of letter V in the tank code would include a construction as labyrinth venting device for highly viscous substances; and
- TE6 would be amended as follows:
  “Tanks may be equipped with a pressure release device of a design which precludes obstruction of the device by the substance carried and which prevents leakage and the build-up of excess over- or underpressure inside the shell.”

Safety: the proposed measure will not affect safety or will improve it.

Feasibility: no problems.

Enforceability: no problems.

Economical aspects: none or positive.

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