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Joint Meeting of the RID Safety Committee and the
Working Party on the Transport of Dangerous Goods
(Geneva, 13-17 September 2004)

PROPOSALS FOR AMENDMENTS TO RID/ADR/ADN

Flame-traps for vacuum-relief valves

(RID: and self-operating ventilation valves)

Proposal by the Government of Germany

**Transmitted by the Central Office for International Carriage
by Rail (OCTI)***

The secretariat has received from the Central Office for International Carriage by Rail (OCTI) the proposal reproduced below.

SUMMARY

Executive summary: For vacuum-relief valves (RID: and self-operating ventilation valves) as safety devices, the requirement of flame-traps or the alternative of an explosion-pressure proof tank should apply as in the case of the requirements for ventilation devices according to 6.8.2.2.6.

Action to be taken: Include paragraph 6.7.2.2.11 in Chapter 6.8 in an appropriate form.

Related documents: None.

* Circulated by the Central Office for International Carriage by Rail (OCTI) under the symbol OCTI/RID/GT-III/2004/1.

Introduction

A tank code containing the letter “F” in part 4 is assigned to substances with a flash-point below 61° C which can be carried in tanks.

In paragraph 4.3.4.1.1 of RID/ADR, “Coding of tanks”, the safety device “F” is defined as a “tank with a venting system, according to 6.8.2.2.6, fitted with a flame trap, or explosion-pressure proof tank”.

Until RID/ADR was restructured in 2001, this requirement was applied to tanks fitted with non-sealing venting devices intended for the carriage of certain flammable liquids and appeared in the special requirements for Class 3. Vacuum-relief valves were also a part of venting devices (in the context of RID, self-operating ventilation valves were also included in this category for tank-wagons).

The requirement of flame-traps for vacuum valves (RID: and self-operating ventilation valves) or the alternative of an explosion-pressure proof tank disappeared during the restructuring of the requirements, following the exclusive assignment of letter “F” to tanks fitted with venting systems according to 6.8.2.2.6 and simultaneously the “new definition” of vacuum-relief valves as safety devices.

Since the majority of flammable substances are carried in tanks with a tank code containing the letter “N” or “H” and since such tanks can also, if necessary, be fitted with vacuum valves/self-operating ventilation valves, bearing in mind special provisions (TE 15), these devices should be treated as venting devices.

In the circumstances, the requirement appearing in 6.7.2.2.11 for portable tanks could also be included for tanks according to Chapter 6.8.

Proposal

Add the following third subparagraph to 6.8.2.1.7 (text adapted from 6.7.2.2.11):

“Vacuum valves [RID: and self-operating ventilation valves] used on portable tanks intended for the carriage of substances meeting the flash-point criteria of Class 3, [including elevated temperature substances carried at or above their flash-point,] shall prevent the immediate passage of flame into the tank, or the shell of the tank shall be capable of withstanding, without leakage, an explosion resulting from the passage of the flame.”

Justification

Safety implications

Reconstitution of the safety level. By means of the reference to the flash-point criterion flammable toxic and corrosive liquids of Classes 6.1 and 8 are also included.

This is deliberate, since the consequences of the passage of flame may have at least the same adverse effects.

Feasibility and enforceability

Vacuum valves and self-operating ventilation valves had to be fitted with flame-traps up to 2001.

The need to include substances carried at temperatures above their flash-point should be considered by the working group on tanks with the participation of experts on the substances. The result could be submitted to the Joint Meeting at its next session.
