

Presentation of EN standards for future reference in chapter 6.8 of the RID/ADR

Transmitted by the European Committee for Standardisation (CEN)

CEN is in the process of launching the formal vote for several standards that have been finalised by the Technical Committee (TC) 296, *Tanks for the transport of dangerous goods*. Those standards are candidate for future reference in RID/ADR. When the standards will be ratified by CEN and published by its members, CEN will issue a formal proposal to refer to these standards, most probably at the September 2002 session of the Joint Meeting.

The assessments of these standards by the CEN consultant are summarised in appendix. Comments to this document are welcome and may be addressed to the CEN consultant, Pierre Wolfs, at wolfsp@apci.com.

Annex 1: Synopses of assessments of standards proposed for references in RID/ADR

1. prEN 13308: Tanks for transporting dangerous goods - Service equipment for tanks - Non pressure balanced foot-valve

2. prEN 13316: Tanks for transporting dangerous goods - Service equipment - Pressure balanced footvalve

Conclusions: The two standards are built according to the same structure. They specify the performance requirements for service equipment to be used with flammable liquids with a vapour pressure not exceeding 110 kPa. The type testing of the valves includes a pressure strength test at 1000 kPa or 1.5 times equipment's MAWP's whichever is the highest, and a break-away test (an impact test with a pendulum) to demonstrate that the valve's external housing breaks under impact and that the security of the valve's sealing mechanism and mounting devices is maintained. All essential requirements of RID/ADR on the subject as outlined in the table hereafter are covered in the standards and there is no contradiction between any part of the standards and these requirements.

Table of concordance between essential requirements of RID/ADR and clauses of PrEN 13308 and prEN 13316

marginal(s) of RID/ADR	Clauses of standard
<p>6.8.2.1.1 Shells, their attachments and <u>their service</u> and structural <u>equipment</u> shall be designed</p> <ul style="list-style-type: none"> - static and dynamic stresses in normal conditions of carriage as defined in 6.8.2.1.2 and 6.8.2.1.13; - prescribed minimum stresses as defined in 6.8.2.1.15. 	5.1 and 6
<p>6.8.2.2.1 The items of equipment shall exhibit a suitable degree of safety comparable to that of shells themselves, and shall in particular:</p> <ul style="list-style-type: none"> - be compatible with the substances carried; and - meet the requirements of marginal 6.8.2.1.1 <p>.....</p> <p>The leakproofness of the service equipment shall be ensured even in the event of the overturning of the tank-container</p>	5 and 6
<p>6.8.2.2.2 The internal stop-valve shall be operable either from above or from below. Its setting - open or closed - shall so far as possible in each case be capable of being verified from the ground. Internal stop-valve control devices shall be so designed as to prevent any unintended opening through impact or an inadvertent act.</p> <p>The internal shut-off device shall continue to be effective in the event of damage to the external control device.</p>	5.5 5.6.2 and 6.3.7

3. prEN 13314: Tanks for transporting dangerous goods - Service equipment - Fill hole cover

4. prEN 13317: Tanks for transporting dangerous goods - Service equipment - Manhole cover assembly

Conclusions: These two standards are also built according to the same structure and also specify performance requirements for service equipment to be used with flammable liquids with a vapour pressure not exceeding 110 kPa. The type testing includes a drop test followed by a leak test to simulate dynamic forces that can result if a tank rolls on its side. All essential requirements of RID/ADR on the subject as outlined in the table hereafter are covered in the standards and there is no contradiction between any part of the standards and these requirements.

Table of concordance between essential requirements of RID/ADR and clauses of prEN 13314 and prEN 13317

marginal(s) of ADR	Clauses of standard
<p>6.8.2.1.1 Shells, their attachments and their service and structural equipment shall be designed</p> <ul style="list-style-type: none"> - static and dynamic stresses in normal conditions of carriage as defined in 6.8.2.1.2 and 6.8.2.1.13; - prescribed minimum stresses as defined in 6.8.2.1.15 	5 and 6; verification of design by drop test and leak test at 2bar
<p>6.8.2.1.15 At the test pressure, the stress σ at the most severely stressed point of the shell shall not exceed the material-dependent limits prescribed below. Allowance shall be made for any weakening due to the welds.</p>	Verification of design by drop test and leak test at 2 bar
<p>6.8.2.2.1</p> <p>The leakproofness of the service equipment including the closure (cover) of the inspection openings shall be ensured even in the event of overturning of the tank-vehicle, demountable tanks and battery-vehicles, taking into account the forces generated by the impact (such as acceleration and dynamic pressure). Limited release of the tank contents due to pressure peak during the impact is however allowed.....</p>	6.3.3