

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

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Item 2 of the provisional agenda

Tanks

Interpretation of requirements by EN 14025: minimum diameter of manholes in tanks

Transmitted by the International Union of Wagon Keepers (UIP)

1. Standard EN 14025 “Design and construction of pressure tanks for transportation of dangerous goods” is mandatory for the design and construction of tanks for tank-wagons. Like EN 12561 “Railway applications – Tank-wagons”, it contains the requirement for a minimum diameter of 500 mm for manholes, but with regard to the details, there are contradicting requirements within and between the standards.

Interpretation 1:

2. The diameter of 500 mm is linked to a nominal diameter (e.g. flanges according to ISO 7005-1 DN 500).

3. This interpretation is possible, as even the standard for flanges according to ISO 7001-1 is referred to in EN 14025 for such manhole covers (see chapter 6.7 of EN 14025). It is also referenced in standard EN 12561, which deals with the equipment of such tanks in detail.

4. This interpretation permits internal diameters that are slightly below 500 mm, as ISO 7005-1 does not focus on the internal diameter, but mentions the external diameter (e.g. for flange type 11 in DN 500 with 508 mm). Bearing in mind the wall thickness in the cylindrical part of the flange, in line with EN ISO 7005-1 a flange of type 11 DN 500 might have an internal diameter of 492 mm.

Interpretation 2:

5. The diameter of 500 mm is to be considered as a minimum internal diameter.

6. This interpretation is mainly driven by safety arguments when entering a tank for inspection. It can be supported by the wording in EN 14025 regarding “Coating of tanks“. Even when the tank is coated, the internal diameter “shall not be less than 500 mm“. Nevertheless, this interpretation contradicts the requirement of EN 14025 Chapter 6.7 to use standardised flanges, as demonstrated above.

7. Discussions with inspection bodies and authorities have shown that the market has differing opinions on this question.

8. UIP is of the opinion that at the time EN 14025 was published, the target was to prohibit much smaller openings than DN 500, which were used in the past. They were still

allowed e.g. on containers in accordance with Chapter 6.7 of RID/ADR/ADN. An absolute minimum was never the intention, as this would not allow to the continued use of standardised flanges DN 500 in accordance with ISO 7005-1.

9. Irrespective of the final decision regarding this topic, the wording in EN 14025 gives no clear answer to this question and needs to be improved/adjusted.

10. The Joint Meeting is asked to discuss and, if possible, request that CEN improve or clarify the standard.
