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Geneva, 19–29 September 2017

Item 2 of the provisional agenda

Tanks

Cross sectional shapes of shells

Transmitted by the Government of the Netherlands*, **

Summary

- Executive summary:** This proposal allows tanks of 6.8.2.1.14 a) to be constructed with sections other than those mentioned in footnote 2 of 6.8.2.1.18 and prevents misinterpretations.
- Action to be taken:** Introduce a new subsection 6.8.2.1.29.
- Related documents:** Informal document INF.15 and paragraphs 23-25 ECE/TRANS/WP.15/AC.1/138/Add.1 of the spring 2015 session, document ECE/TRANS/WP.15/AC.1/2017/20, Informal document INF.8 and paragraphs 19-22 of ECE/TRANS/WP.15/AC.1/146/Add.1 of the spring 2017 session.

Introduction

1. Discussions during the spring 2017 session in the Working Group on Tanks about document ECE/TRANS/WP.15/AC.1/2017/20, where the question has been asked whether

* In accordance with the programme of work of the Inland Transport Committee for 2016-2017, (ECE/TRANS/2016/28/Add.1 (9.2)).

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a circular shell with a section taken out is still a circular shell or another shaped shell, it was concluded that 6.8.2.1.18 left room for different interpretations. It was also said that technical progress should not be hindered and that deviations from the radii and convexity should be possible locally if proven to deliver an equal level of safety.

Proposal

2. Introduce a new paragraph 6.8.2.1.29 to read:

“Disregarding the requirements of 6.8.2.1.18 the cross sectional shape of shells of 6.8.2.1.14(a) may contain local recesses or protrusions such as sumps, cut-outs or recessed manhole constructions. They may be constructed of flat or shaped (concave or convex) sheet metal. Dents and other unintended deformations shall not be regarded as recesses or protrusions.”

Justification

3. The discussion concerning the circular shell with the inversed section over the 5th wheel of the semi-trailer fired new discussions on the reading of 6.8.2.1.18 and its footnote 2. Working Group 2 of CEN TC 296 made several observations concerning deviations from 6.8.2.1.18 and its footnote 2. For instance, for many decades tanks for petroleum products have been equipped with sumps made of flat material. Also so called “cut outs” are required to allow for housing of valves and measuring devices within the contours of tank vehicles of small fixed tanks for delivery transport.

4. This proposal reflects the outcome of the discussion in the Working Group on Tanks during the March 2017 session (see item 6 of the report ECE/TRANS/WP.15/AC.1/146/Add.1) and the observations made in Working Group 2 of CEN TC 296. Adoption is necessary to allow the new revision of EN 13094, containing amendments allowing recessions and protrusions on gravity discharge shells, to be adopted as a reference in RID/ADR.

5. The revised standard EN 13094, yet in the approval process, will contain sufficient details to regulate the correct application of recesses and protrusions, such as size, placing in a protected area, use of plate thicknesses and calculation (FEM) to check stresses in the construction. If wished for these details, these can also be included in the regulation itself. As this amendment will offer new options, existing tanks are not affected and a transitional measure is not necessary.
