Organisation intergouvernementale pour les transports internationaux ferroviaires
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr
Intergovernmental Organisation for International Carriage by Rail

INF. 2

11 August 2020

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Joint Coordinating Group of Experts
(Video-conference, 8 and 9 September 2020)

Agenda item 3: Review and report on the list of priority items agreed at the previous meeting (see also document OTIF/RID/CE/JCGE 2019-B/Add.1)

1 b - Design and construction of vehicles: specification method; functional/technical solutions
ITEM 1: 6.8.2.1.2 RID

Transmitted by Germany

1. At the 16th session of the RID Committee of Experts' working group on tank and vehicle technology (Krakow, 19-20 November 2018) and the 10th session of the RID Committee of Experts' standing working group (Krakow, 21-23 November 2018), it was decided to subject the requirements concerning the ability of tank-wagons to withstand the stresses which occur during carriage by rail in accordance with RID 6.8.2.1.2 to a fundamental analysis of the problem and to develop specific proposals for solutions as to how these requirements should be dealt with in future in the interaction between the competent authorities according to RID and the notified bodies according to the TSIs/UTPs (railway law) (see also paragraphs 31 to 35 of the final report of the 10th session of the RID Committee of Experts' standing working group – document OTIF/RID/CE/GTP/2018-B).

2. It was agreed that in the framework of the national ad hoc working group referred to in informal document INF.8 of the 10th session of the standing working group, Germany would draft proposals for the future form of the approval procedure and submit them to the next session of the working group on tank and vehicle technology.

3. The background to these reviews were leakages of UN 1789 HYDROCHLORIC ACID from tank-wagons in 2018. These were tank-wagons from a series of vehicles of 116 new tank-wagons approved by Germany in 2017. These vehicles were intended be used for transport between Germany and Spain (Leverkusen-Tarragona). It was noticed that three of these vehicles were leaking; two tank-wagons in France and one tank-wagon at a works site in Leverkusen. As a result of what happened in France, the French Safety Authority (EPSF) issued a prohibition

against tank-wagons of this type being operated in France when loaded. Shortly after this, the operator announced that the tank-wagons would no longer be operated in Germany either, until the cause was clear and measures had been coordinated with the competent authorities. Investigations revealed that on both types of protective lining used, the damage to the protective lining occurred at the same places on the tank-wagons in each case. The assumption is that the interaction between the forces acting on the tank (including its subframe) and the material used for the protective lining led to the formation of cracks and leakage of the goods being carried. The incident was certainly facilitated by the fact that the provisions concerning the ability to withstand the stresses which occur during carriage by rail are not sufficiently harmonised between the different regulations. In this respect, it is absolutely vital to clarify the material requirements in both sets of regulations so that the competent authorities according to RID and the notified bodies according to the TSIs/UTPs can also apply them correctly. Clear rules on the material requirements provide the basis for the clear allocation of responsibilities to the respective bodies. Germany therefore believes that it is important to present this interaction more clearly in the various dangerous goods and railway regulations so that such occurrences can be avoided in future.

4. At the 17th session of the RID Committee of Experts' working group on tank and vehicle technology (Ludwigshafen, 14 and 15 October 2019), the representative of Germany presented the results of the national ad hoc working group on the future form of the approval procedure for RID tank-wagons and a proposal to amend the text of footnote 1 to 6.8.2.1.2 (see informal document INF.1).

5. Paragraphs 34 to 41 of the final report of the 17th session of the RID Committee of Experts' working group on tank and vehicle technology (document OTIF/RID/CE/GTT/2019-A):

"34. The representative of Germany introduced informal document INF.1, which contained the results of the national ad hoc working group on the future form of the approval procedure for RID tank-wagons and a proposal to amend the text of footnote 1 to 6.8.2.1.2. The ad hoc working group had established that the calculation provisions and the load cases to be considered in each case in standards EN 12663-2:2010 and EN 14025 are based on very different design concepts and should not be mixed up. It had endorsed the decision of the 10th session of the standing working group no longer to take account of the decision of its 2nd session with regard to the permissible stresses when assessing the ability of tank-wagons to withstand stresses.

35. The ad hoc working group had pointed out that as a rule, the competent bodies for the tests according to the TSI or UTP are not accredited to check that the provisions of RID have been complied with. The ad hoc working group had agreed that when assessing the ability of tank-wagons to withstand stresses, the following points would also have to be taken into account in addition to the requirements of the TSI and UTP referred to in footnote 1 to 6.8.2.1.2:
– Maximum working pressure of the tank to be superimposed on the load cases,
– Operating temperature range of the tank,
– Minimum wall thickness of the tank,
– Special provisions TE 22 and TE 25 and
– Tank liner.
The ad hoc working group had been of the view that standard EN 12663-2:2010 would have to be supplemented with the first four points so that all the tests to be carried out were covered by the scope of accreditation of the respective competent bodies. In parallel, standard EN 14025 should be supplemented with suitable verification processes for the strength of liners.

36. The Chairman said that these two standards could be supplemented during the revision that was already planned for next year.

37. As an interim solution, Germany proposed an amendment to footnote 1 to 6.8.2.1.2 to make the applicable requirements more specific (see annex I).

38. The representative of UIP pointed out that the text proposed by Germany did not contain any threshold values to be complied with and that this could lead to different interpretations by the competent authorities. He added that there was not yet any procedure for checking the strength of the liner and was of the view that before RID was amended, the principles should first be dealt with in the relevant standards.

39. The representative of Germany confirmed that the standardisation work was essential. However, he was still of the view that making the text more specific, as proposed, would assist the competent authorities in the approval procedure and that this could be done already, irrespective of the standardisation work.

40. The working group thought the points proposed by Germany were correct. The Chairman asked the representative of UIP to submit an alternative text proposal to the next session of the standing working group, if necessary.

41. The Chairman of the working group and the representative of Germany said they were prepared to draft a proposal to amend or supplement standards EN 12663-2:2010 and EN 14025 and submit it to the standardisation bodies."

6. UIP submitted informal document INF.4 to the 11th session of the RID Committee of Experts' standing working group (Vienna, 25-28 November 2020), in which it supported Germany's above-mentioned proposal in principle, but suggested some minor amendments in order to leave the required detailed discussions to the standardisation bodies. In its informal document INF.10, Germany partly refuted some of these proposed amendments. The representatives of Germany and UIP subsequently submitted informal document INF.12 with a jointly revised text proposal, which was adopted with a few amendments. Owing to a general reservation entered by ERA, this text was placed in square brackets. See also paragraphs 27 to 33 and Annex I of the final report OTIF/RID/CE/GTP/2019-A.

7. The text adopted in square brackets for footnote 1 to RID 6.8.2.1.2 reads as follows:

*[**6.8.2.1.2** Amend footnote 1 to read as follows:*

"[1] This requirement is deemed to be met if

(a)

- *the notified body in charge of verifying compliance with the technical specification for interoperability (TSI) relating to the subsystem "rolling stock – freight wagons" of the rail system in the European Union (Commission Regulation (EU) No 321/2013 of 13 March 2013) or*

- *the assessing entity in charge of verifying compliance with the uniform technical prescriptions (UTP) applicable to the Rolling Stock subsystem: FREIGHT WAGONS – (Ref. A 94-02/2.2012 of 1 January 2014)*

has successfully evaluated the requirements listed below, in addition to the requirements of the TSI or UTP mentioned above, and has confirmed this compliance by a relevant certificate:

(1) That the maximum working pressure of the tank has been superimposed on the load cases applicable to the assessment of the ability to withstand stresses,

(2) That the operating temperature range of the tank has been taken into account in the load cases applicable to the assessment of the ability to withstand stresses,

(3) That the minimum wall thickness of the shell in accordance with RID 6.8.2.1 and 6.8.2.6 has been taken into account in the load cases applicable to the assessment of the ability to withstand stresses,

(4) Special provisions TE 22 and TE 25 in accordance with RID 6.8.4 (b).

To evaluate points (1) to (3), the procedures and maximum allowable stresses according to the TSI or UTP and its referenced standards shall be applied;

and

(b)

For tanks with a protective lining, that the competent authority for the design type test in accordance with RID 6.8.2.3.1 or a body designated by that authority has assessed and certified the ability of the protective lining, particularly those with weaker elastic properties than the shell, e.g. hard rubber or enamel, to withstand the stresses in the load cases. The necessary data resulting from the load cases shall be exchanged between the bodies involved."]

8. As a result of the coronavirus pandemic (COVID-19), the 56th session of the RID Committee of Experts was cancelled and the 12th session of the RID Committee of Experts' standing working group was postponed. As a result of the cancellation of the RID Committee of Experts, the vote concerning the amendments to RID that are to enter into force on 1 January 2021 was carried out using the written procedure. On 13 May 2020, a video-conference was held in which the comments sent in by delegates were discussed. The amendment to footnote 1 to RID 6.8.2.1.2 that was adopted by the standing working group in square brackets was removed from the document with the planned amendments at the suggestion of the European Commission, following prior discussion at a coordination meeting of the EU Member States, so it will not be taken into account in the 2021 revision of RID.

Proposal for next steps

9. Germany is still of the view that footnote 1 to RID 6.8.2.1.2 needs to be clarified so that the requirements concerning the ability to withstand the stresses which occur during carriage by rail can be correctly applied by the competent authorities in accordance with RID and the notified bodies in accordance with the TSIs/UTPs. The text proposed in the above-mentioned informal document INF.12 is suitable for this purpose.

10. In addition, standards EN 12663-2:2010 and EN 14025 should be supplemented or amended accordingly.