

OTIF/RID/CE/GTP/2018/5

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Original: German

RID: 9th Session of the RID Committee of Experts' standing working group
(Berne, 28 - 30 May 2018)

Subject: Extra-large tank-containers – Discussions at the Joint Meeting's working group on tanks

Information from the Secretariat

Introduction

1. At its 8th session, the standing working group decided to have a detailed technical discussion on extra-large tank-containers at the working group on tank and vehicle technology (see report OTIF/RID/CE/GTP/2017-A, paragraphs 80 to 90).
2. The report of the working group on tank and vehicle technology that took place on 30 and 31 January 2018 is contained in document [OTIF/RID/CE/GTT/2018-A](#), which should be presented to the 9th session of the standing working group under the new agenda item 6 (Report of the working group on tank and vehicle technology) (see informal document INF.2).
3. The working group on tank and vehicle technology asked the Joint Meeting's working group on tanks to discuss various points relating specifically to tanks (wall thickness, pressure resistance of closures, information on the tank concerning the next inspection and general requirements). To this end, the Secretariat submitted informal document INF.19 to the RID/ADR/ADN Joint Meeting (Berne, 12 to 16 March 2018) setting out the report of the working group on tank and vehicle technology.
4. The results of discussions at the working group on tanks are summarised in informal document INF.47 from the last Joint Meeting.
5. Paragraphs 27 to 35 of informal document INF.47 are reproduced below. They are to be taken into account in the further work of the working group on tank and vehicle technology.

Extract from informal document INF.47 of the RID/ADR/ADN Joint Meeting (Berne, 12 to 16 March 2018)

ITEM 11: Informal document INF.19 (OTIF Secretariat) – Extra-large tank-containers and informal document INF.24 (UIC)

27. New extra-large tank-containers have been developed and are intended mainly to be used in rail transport. Questions were raised as to whether the current requirements are adequate for these containers. It was noted that the current extra-large tank-containers are approved in accordance with the current regulations.

28. This subject had previously been discussed at the 8th session of the RID Committee of Experts' standing working group and at the working group on tank and vehicle technology that met in Hamburg. In the report of the meeting in Hamburg, for a number of tank-related items, the advice of the Joint Meeting's tank working group had been sought. The following four tank-related issues were identified and discussed.

29. Minimum wall thickness:

While the minimum wall thickness of tank-wagons for liquids is 6 mm for mild steel, the equivalent wall thickness for other metals must never be lower than 4.5 mm. The minimum wall thickness of tank-containers for liquids over 1.80 m in diameter is also 6 mm for mild steel, but the equivalent wall thickness for other metals must never be lower than 3 mm.

30. Discussion revealed that the freight transport system developed in the 1970s was probably designed around a tank-container with a maximum total mass of approximately 30.5 tonnes and a maximum capacity of around 36,000 litres. Originally, the tanks of these tank-containers were protected by full frames. It was thought that this was one of the reasons why the wall thickness was allowed to be reduced from 6 mm for mild steel to not less than 3 mm for other metals. It could therefore be questioned as to whether the reduction to 3 mm can be justified in the case of an increase in capacity to 73,000 litres, which is comparable to the capacity of bogie tank-wagons.

31. It was felt that reducing wall thicknesses should be discussed in relation to the total package of protection of the tank-container. It was noted from the report that a risk analysis comparing rail tank-wagons and extra-large tank-containers was already envisaged.

32. Pressure resistant closures:

As extra-large tank-containers are longer than conventional tank-containers, the pressures due to liquid surge have increased as well. This could justify the application of 6.8.2.2.4 to extra-large tank-containers. The representative of the manufacturer confirmed that the existing extra-large tank-containers complied with this requirement.

33. Markings on both sides of the tank-container:

Tank-wagons are provided with markings according to 6.8.2.5.2 on each side of the tank-wagon. On tank-wagons, a mark concerning the date of the next inspection is also affixed. However, for tank-containers there are requirements for markings with no specified position and no mandatory marking indicating the next periodic inspection. It was asked whether markings in line with those for tank-wagons should be made applicable to extra-large tank-containers. Some experts suggested not to complicate the system and not to mark both sides of tank-containers and portable tanks, or to mark them all on both sides. It was also recalled that recently, marking the date of the next inspection on portable tanks

had been proposed to the UN Sub-Committee on the Transport of Dangerous Goods, but that this had not been accepted.

34. Reference to 7.1.3 in 6.8.2.1.2:

It was agreed to introduce a link between the two subsections to remind constructors of the additional accelerations to be taken into account.

Proposal 6

6.8.2.1.2 Introduce a new footnote 2 in RID/1 in ADR after “Tank-containers” in 6.8.2.1.2 to read:

“^{2/1} See also 7.1.3.”

35. The experts of the tank working group felt that the issue of tank thickness and the pressure resistance of closures should be part of some more comprehensive work. As this also involved rail-specific issues, the tank working group thought that it would be appropriate that this be dealt with by the RID working group on tank and vehicle technology and that for tank issues the tank experts should be invited.
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