

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

Geneva, 21 September – 1 October 2021

30 September 2021

Item 2 of the provisional agenda

Tanks

Report of the Working Group on Tanks

Meeting held remotely in Geneva, on 27–29 September 2021

1. The Working Group on Tanks met from 27 to 29 September 2021 on a virtual basis on the mandate from the RID/ADR/ADN Joint Meeting, under the chairmanship of Mr. Arne Bale (United Kingdom), with Mr. Kees de Putter (Netherlands) as secretary. The relevant documents were submitted to the plenary session and transferred to the Working Group for consideration.

2. For the Working Group on Tanks, 41 experts registered for participation from 14 countries and 6 non-governmental organizations and the European Commission. They dealt with the following official and informal documents:

Documents:

- ECE/TRANS/WP.15/AC.1/2021/23/Rev1 (United Kingdom)
- ECE/TRANS/WP.15/AC.1/2021/24/Add 1 (Secretariat)
- ECE/TRANS/WP.15/AC.1/2021/27 (UIP)
- ECE/TRANS/WP.15/AC.1/2021/34 (Switzerland)
- ECE/TRANS/WP.15/AC.1/2021/36 (LGE)
- ECE/TRANS/WP.15/AC.1/2021/43 (France)

Informal documents:

- INF.10 (Poland)
- INF.28 (Germany)
- INF.35 (France)
- INF.38 (Switzerland)
- INF.40 (United Kingdom)
- INF.42 (United Kingdom)
- INF.43 (France)

3. Due to prioritizing document ECE/TRANS/WP.15/AC.1/2021/23/Rev.1, the following documents could not be dealt with due to time restraints. The secretariat is requested to keep these on the agenda for consideration at the next session.

Documents:

- ECE/TRANS/WP.15/AC.1/2021/29 (UIC)
- ECE/TRANS/WP.15/AC.1/2021/42 (Netherlands)

Informal documents:

- INF.11 (United Kingdom) (spring 2021 session)
- INF.15 (United Kingdom) (spring 2021 session)
- INF.3 (Netherlands)
- INF.6 (CLCCR)
- INF.11 (UIP)
- INF.17 (Switzerland)
- INF.23 (United Kingdom)
- INF.27 (Germany)
- INF.32 (Chair Ad-Hoc WG)
- INF.41 (United Kingdom)

Item 1: Informal Working Group on the Inspection and Certification of Tanks.

Documents: ECE/TRANS/WP.15/AC.1/2021/23/Rev.1 (United Kingdom)
ECE/TRANS/WP.15/AC.1/2021/34 (Switzerland)

Informal documents: INF.28 (Germany), INF.35 (France), INF.38 (Switzerland), INF.40 (United Kingdom), INF.42 (United Kingdom) and INF.43 (France)

4. In a general discussion and further discussions on the proposals and questions in INF.38 it became clear, other than for some text in square brackets, that it would be difficult to adopt separate sections of the proposals in 2021/23/Rev.1 as they were strongly interlinked.

5. It may be concluded that difficulties in adopting the proposals would originate from different perspectives, including reciprocal recognition of work done by the inspection bodies, differences between RID and ADR, and uncertainties and consequences of the introduction of the new system. In understanding the new system, the explanatory document 2021/34 is helpful. The aim is still to establish a system of robust reciprocal recognition of inspection bodies.

6. Concern was raised on a fair introduction of the system as it was noted that contracting parties were at different stages of accreditation of inspection bodies and experts. These different stages would lead to some countries benefiting immediately, while others still have a long way to go. It was suggested that ensure a fair introduction of the new system, consideration should be given to refining the (transitional) measures to provide a step by step implementation of the new tasks, recognizing that 1.8.6.2.4.3 can be applied.

7. The corrections in INF.40 were accepted apart from that relating to 1.8.7.1.5. After discussion on INF.42 it was decided to keep the wording concerning in-house inspection services in 6.8.1.5.3 (b) and 6.8.1.5.4 (b) in square brackets pending further discussion.

8. Based on discussion of the Informal documents the following amendments were proposed for the wording in 2021/23/Rev.1:

Proposal 1 - (INF.28) Replace the note to 1.8.6.3.3 to read:

- *NOTE: The following provisions only apply to type A inspection bodies. Type B inspection bodies are not allowed to delegate the activities for which they are approved. For in-house inspection services see 1.8.7.7.2.*

Proposal 2 - (INF.28) Amend the last paragraph of 1.8.7.7.2 to read:

"The in-house inspection service may, in specific cases only, subcontract specific parts of its activities if approved by the inspection body which has authorized it. The subcontractor shall additionally be accredited according to EN ISO/IEC 17025:2017 (except clause 8.1.3) or EN ISO/IEC 17020:2012 (except clause 8.1.3) as an independent and impartial testing laboratory or inspection body in order to perform testing tasks in accordance with its accreditation."

Proposal 3 - (INF.28) Amend the first paragraph of 1.8.7.1.5 to read (modified wording underlined):

"1.8.7.1.5 *Type approval certificates, inspection certificates and reports for the products (pressure receptacles, tanks, service equipment, and the assembly of the elements, structural equipment and service equipment of battery wagons/battery vehicles or MEGCs), including the technical documentation, shall be kept."*

Proposal 4 - (INF.28) Amend the "Note 2" to 1.8.7 to read (new wording is underlined, deleted wording stricken through):

"NOTE 2: In this section, "manufacturer" means the enterprise who is responsible to the competent authority for all aspects of the conformity assessment and for ensuring the conformity of construction whose name and mark appear in the approvals and on the markings. It is not essential that the enterprise is directly involved in all stages of the construction of the product (see 1.8.7.1.5) ~~tanks, elements~~

~~of battery wagons/battery vehicles, MEGCs, or pressure receptacles, or structural or service equipment which is subject to the conformity assessment.”~~

Proposal 5 - (INF.28) Amend the second sentence of 1.8.7.2.2.2 to read (deleted wording stricken through):

“If within that period, the relevant technical requirements of RID/ADR ~~(including the referenced standards)~~ have changed so that the approved type is no longer in conformity with them, then the type approval is no longer valid.”

Proposal 6 - (INF.28) Amend the second paragraph after the table of 6.2.2.12 to read:

“For separate conformity assessments (e.g. cylinder shell and closure) see 6.2.1.4.4.”

Proposal 7 - (INF.28) Amend the second paragraph after the table of 6.2.3.6.1 to read:

“For separate conformity assessments (e.g. cylinder shell and closure) see 6.2.1.4.4. For non-refillable pressure receptacles, separate type approval certificates for either the shell or the closure shall not be issued.”

Proposal 8 - (INF.28) Amend the fifth paragraph of 6.8.2.3.2 to read (new wording is underlined, deleted wording stricken through):

“When the manufacturer of service equipment ~~has carried out~~ had a separate type examination carried out and when ~~he~~ the manufacturer requests it, the competent authority shall issue a certificate attesting that the type which has been examined meets the standard listed in the table in 6.8.2.6.1 or 6.8.3.6.”

Proposal 9 - (INF.35) Delete the note under 6.1.8.5.5 and add a new note under the first paragraph to 6.1.8.5 read:

“NOTE: These provisions apply, subject to the compliance of the inspection bodies with the provisions of 1.8.6, and without prejudice to rights and obligations, in particular notification and recognition, fixed for them by agreements or legal acts (e.g. Directive 2010/35/EU) otherwise binding on RID Contracting States/Contracting Parties of ADR”.

Proposal 10 - (INF.35) Amend 1.8.6.2.2.2 to read:

“The competent authority shall ensure that the inspection body continuously meets the conditions for its approval and shall end it if these conditions are not met. However, in the case of suspension of the accreditation, the approval is only suspended during the suspension period of the accreditation”.

Proposal 11 - (INF.38) In 1.6.3.x and 1.6.4.x change the last reference to “Chapter 6.8” to “1.8.6”.

Proposal 12 - (INF.38) Amend the second paragraph of 1.8.6.2.4.3:

“Where a competent authority wishes to engage the services of an inspection body already approved by another competent authority to carry out activities related to conformity assessments and inspections on its behalf, then that competent authority shall add this inspection body, the scope of activities for which it is recognized, and the competent authority that approved the inspection body, to the list mentioned in 1.8.6.2.4.2 and inform the secretariat of OTIF/UNECE. If the approval is withdrawn or suspended the recognition is no longer valid.”

Proposal 13 - (INF.43) In 6.8.1.5.6 left hand side for ADR only a new paragraph to read:

“Exceptional inspections may alternatively be performed in the country of manufacture by an inspection body approved or recognized by the competent authority of the country of manufacture or the country of registration.”

Item 2: Report of the Ad-Hoc Working Group on the Harmonization of RID/ADR/ADN with the United Nations Recommendations on the transport of dangerous Goods.

Document: ECE/TRANS/WP.15/AC.1/2021/24/Add.1 (Secretariat)

9. The Tanks Working Group was asked to check if the tank code and special provisions for the new entry for “UN 3550 COBALT DIHYDROXIDE POWDER” are correct. Based on the rationalized approach of Chapter 4.3 and comparison with other similar substances it is confirmed that the tank codes and tank special provisions are correct.

Item 3: Development of the requirements on fibre-reinforced plastics (FRP) tanks.

Document: ECE/TRANS/WP.15/AC.1/2021/43 (France)

10. The Tanks Working Group confirmed the text proposed for the new chapter 6.13 in ADR only for FRP tanks, taking into account the amendments from the last UNTDG meeting that were included by the secretariat. It was agreed that 6.13.2.5 penultimate paragraph shall be amended to be in line with 6.9.2.3.4. It was also agreed that paragraph 6.13.2.x and the following paragraphs should be renumbered.

11. As requirements were amended in line with the new Chapter 6.9 it was felt that transitional measures should be included. The transitional measures would allow for the continued use of existing FRP tanks and those that will be constructed in the near future based on existing and still valid type approvals. The final date of construction needs to be verified and are therefore kept in square brackets.

Proposal 14 - Introduce a new transitional measure 1.6.3.xy (ADR only) to read:

“1.6.3.xy Fixed tanks (tank-vehicles) and demountable tanks constructed before [1 July 2033] in accordance with the requirements of Chapter 6.9 in force up to 31 December 2022 but which do not however conform to the requirements of Chapter 6.13 applicable as from 1 January 2023, may still be used.”

Proposal 15 - Introduce a new transitional measure 1.6.4.xy (RID/ADR) to read:

“1.6.4.xy Tank-containers constructed before [1 July 2033] in accordance with the requirements of Chapter 6.9 in force up to 31 December 2022 may still be used.”

Item 4: Clarification on using tanks after the deadline specified for the next test or inspection.

Document: ECE/TRANS/WP.15/AC.1/2021/27 (UIP)

Informal document: INF.10 (Poland)

12. In previous sessions of the Tanks Working Group no consensus could be reached on the appropriate resolution of this topic. The plenary was requested to take a decision on the principle. No decision was taken, and the Tanks Working Group was asked to prepare two options so that a decision could be made.

13. Below the amendments for both options are given including consequential amendments to 6.8.2.4.3 that would be required for either one of the options:

Option 1 allows during the three months after the specified date for the intermediate inspection that tanks can be filled, carried and emptied as normal.

Amend 4.3.2.3.7 to read as follows (new wording underlined, deleted wording stricken through):

“4.3.2.3.7 *Tank-wagons, demountable tanks, battery-wagons (RID) / Fixed tanks (tank-vehicles), demountable tanks, battery-vehicles (ADR), tank-containers, tank swap bodies and MEGCs may not be filled or offered for carriage after the date specified ~~deadline~~ for the ~~test or~~ inspection required by 6.8.2.4.2, 6.8.3.4.6 (a) and 6.8.3.4.12 ~~has expired~~.*

However, tank-wagons, demountable tanks, battery-wagons (RID) / fixed tanks (tank-vehicles), demountable tanks, battery-vehicles (ADR), tank-containers, tank swap bodies and MEGCs filled prior to the date of expiry of date specified for the ~~last~~ periodic inspection may be carried:

(a) for a period not to exceed one month after ~~the expiry of these deadlines~~ this date;

(b) unless otherwise approved by the competent authority, for a period not to exceed three months after ~~the expiry of these deadlines~~ this date in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document.”

Insert a new 4.3.2.3.8 to read:

“4.3.2.3.8 *Tank-wagons, demountable tanks, battery-wagons (RID) / Fixed tanks (tank-vehicles), demountable tanks, battery-vehicles (ADR), tank-containers, tank swap bodies and MEGCs may continue to be used after the date specified for the intermediate inspection required by 6.8.2.4.3, 6.8.3.4.6 (b) and 6.8.3.4.12:*

(a) for a period not to exceed three months after this date;

(b) unless otherwise approved by the competent authority, for a period not to exceed five months after this date in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document.”

Amend 1.4.2.2.1 (d) to read as follows (new wording underlined, deleted wording stricken through):

“(d) Ascertain that the ~~deadline~~ date specified for the next inspection for tank-wagons, battery-wagons, wagons with demountable tanks (RID) / tank-vehicles, battery-vehicles, demountable tanks (ADR), portable tanks, tank-containers and MEGCs, taking into account the provisions of 4.3.2.3.7 and 4.3.2.3.8, has not expired;

(Amend the note by deleting reference to 4.3.2.3.7)”.

Amend 1.4.3.3 (b) to read as follows (new wording underlined, deleted wording stricken through):

“(b) Ascertain that the ~~deadline~~ date specified for the next inspection for tank-wagons, battery-wagons, wagons with demountable tanks (RID) / tank-vehicles, battery-vehicles, demountable tanks (ADR), portable tanks, tank-containers and MEGCs, taking into account the provisions of 4.3.2.3.8, has not expired;”.

Amend 5.4.1.1.11 as follows:

* In the heading delete “periodic”;

* In the first paragraph add “4.3.2.3.8 (b)”;

* introduce a new indent reading “CARRIAGE IN ACCORDANCE WITH 4.3.2.3.8 (b)”.

Option 2 allows for filling before the date specified for the next inspection and finishing of the transport operation up to 3 months after this date. In this case no additional period is included for return of dangerous goods for proper disposal or recycling.

Amend 4.3.2.3.7 to read as follows (new wording underlined and deleted wording stricken through):

“4.3.2.3.7 *Tank-wagons, demountable tanks, battery-wagons (RID) / fixed tanks (tank-vehicles), demountable tanks, battery-vehicles (ADR), tank-containers, tank swap bodies and MEGCs may not be filled or offered for carriage after the date specified ~~deadline~~ for the ~~test or~~ inspection required by 6.8.2.4.2, 6.8.2.4.3, 6.8.3.4.6 and 6.8.3.4.12 ~~has expired~~.*

However, tank-wagons, demountable tanks, battery-wagons (RID) / fixed tanks (tank-vehicles), demountable tanks, battery-vehicles (ADR), tank-containers, tank swap bodies and MEGCs filled prior to the date ~~of expiry of the last~~ periodic inspection specified for the next inspection may be carried:

(a) for a period not to exceed one month after the expiry of these deadlines the date specified if the inspection due is a periodic inspection in accordance with 6.8.2.4.2, 6.8.3.4.6(a) and 6.8.3.4.12;

(b) unless otherwise approved by the competent authority, for a period not to exceed three months after the expiry of these deadlines of the date specified, if the inspection due is a periodic inspection in accordance with 6.8.2.4.2, 6.8.3.4.6(a) and 6.8.3.4.12 in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document;

(c) for a period not to exceed three months after the date specified, if the inspection due is an intermediate inspection in accordance with 6.8.2.4.3, 6.8.3.4.6 (b) and 6.8.3.4.12.”

Amend 1.4.2.2.1 (d) to read as follows (new wording underlined, deleted wording stricken through):

“(d) Ascertain that the ~~deadline~~ date specified for the next inspection for tank-wagons, battery-wagons, wagons with demountable tanks (RID)/tank-vehicles, battery-vehicles, demountable tanks (ADR), portable tanks, tank-containers and MEGCs, has not expired;”.

Amend 1.4.3.3 (b) to read as follows (new wording underlined, deleted wording stricken through):

“(b) He shall ascertain that the date ~~of the~~ specified for the next inspection for tank-wagons, battery-wagons, wagons with demountable tanks (RID)/tank-vehicles, battery-vehicles, demountable tanks (ADR), portable tanks, tank-containers and MEGCs, has not expired;”.

Consequential amendments for both options:

14. In 6.8.2.4.3 amend the first three subparagraphs to read as follows, taking into account the amendments adopted by the Joint Meeting in March 2021 (see report ECE/TRANS/WP.15/AC.1/160, Annex II) (new text is shown in **bold**, deleted text is crossed out).

“6.8.2.4.3 Shells and their equipment shall undergo intermediate inspections no later than four (RID) / three (ADR)/two and a half years after the initial inspection and each periodic inspection. ~~These intermediate inspections may be performed within three months before or after the specified date.~~

However, the intermediate inspection may be performed at any time before the specified date.

If an intermediate inspection is performed more than three months before the specified date, another intermediate inspection shall be performed no later than four (RID) / three (ADR)/two and a half years after this earlier date **or**

alternatively a periodic inspection may be performed in accordance with 6.8.2.4.2.”

Item 5: Mandatory fitment of safety valves to tanks carrying flammable liquefied gases.

Document: ECE/TRANS/WP.15/AC.1/2021/36 (LGE)

15. The proposals were adopted with some modifications in particular regarding bursting discs when used in conjunction with safety valves and protection of safety valves.

Proposal 16 - Amend 6.8.3.2.9 for ADR across the page and RID to the right hand side only, to read: (new wording underlined, deleted wording stricken through):

“6.8.3.2.9 *Tanks intended for the carriage of flammable compressed or liquefied gases shall or dissolved gases, may be fitted with spring loaded safety valves. Tanks intended for the carriage of compressed or non-flammable liquefied gases or dissolved gases, may be fitted with safety valves. Safety valves, where fitted, shall meet the requirements of 6.8.3.2.9.1 to 6.8.3.2.9.5.*

6.8.3.2.9.1 *Safety ~~These~~ valves shall be capable of opening automatically under a pressure between 0.9 and 1.0 times the test pressure of the tank to which they are fitted. They shall be of such a type as to resist dynamic stresses, including liquid surge. The use of dead weight or counter weight valves is prohibited. The required capacity of the safety valves shall be calculated in accordance with the formula contained in 6.7.3.8.1.1.*

Safety valves shall be designed to prevent or be protected from the entry of water or other foreign matter which may impair their correct functioning. Any protection shall not impair their performance.

6.8.3.2.9.2 *If tanks required to be hermetically closed are equipped with safety valves, these shall be preceded by a bursting disc and the following conditions shall be met:*

- *The minimum burst pressure at 20 °C, tolerances included, shall be greater than or equal to 1.0 times the test pressure;*
- *The maximum burst pressure at 20 °C, tolerances included, shall be equal to 1.1 times the test pressure; and*
- *The bursting disc shall not reduce the required discharge capacity or correct operation of the safety valve.*

A pressure gauge or another suitable indicator shall be provided in the space between the bursting disc and the safety valve, to enable detection of any rupture, perforation or leakage of the disc.

6.8.3.2.9.3 *Safety valves shall be directly connected to the shell or directly connected to the outlet of the bursting disc.*

6.8.3.2.9.4 *Each safety valve inlet shall be situated on top of the shell in a position as near the transverse centre of the shell as reasonably practicable. All safety valve inlets shall under maximum filling conditions be situated in the vapour space of the shell and the devices shall be so arranged as to ensure that the escaping vapour is discharged unrestrictedly. For flammable liquefied gases, the escaping vapour shall be directed away from the shell in such a manner that it cannot impinge upon the shell. Protective devices which deflect the flow of vapour are permissible provided the required safety valve capacity is not reduced.*

6.8.3.2.9.5 *Arrangements shall be made to protect the safety valves from damage caused by the tank overturning or striking overhead obstructions. Where possible safety valves shall not project outside of the profile of the shell.”*

Proposal 17 - Introduce new transitional measures in 1.6.3 for ADR and 1.6.4 for RID and ADR to read:

(ADR only)

1.6.3 Insert the following new transitional provision:

“1.6.3.xx Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 January 2024 in accordance with the requirements in force up to 31 December 2022 but which do not, however, conform to the requirements applicable as from 1 January 2023 regarding the fitting of safety valves in accordance with 6.8.3.2.9 may still be used.”

(RID/ADR)

1.6.4 Insert the following new transitional provision:

“1.6.4.xx Tank-containers constructed before 1 January 2024 in accordance with the requirements in force up to 31 December 2022 but which do not, however, conform to the requirements applicable as from 1 January 2023 regarding the fitting of safety valves in accordance with 6.8.3.2.9 may still be used.”

Proposal 18 - Consequential amendment to the second paragraph of 6.8.2.2.10 to read (new wording is underlined, deleted wording stricken through):

“Except for tanks intended for the carriage of compressed, liquefied or dissolved gases where the arrangement of the bursting disc and the safety valve shall ~~be such~~ as to satisfy the ~~competent authority~~ requirements of 6.8.3.9.2, burst pressures of the bursting disc shall satisfy the following requirements:”
