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## 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

Bern, 16–20 March 2020

Item 5 (a) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN:  
pending issues**

### **Requirements for the structural serviceability of cargo transport units**

**Transmitted by the expert of the European Chemical Industry Council (CEFIC)\*,\*\***

#### *Summary*

<b>Executive summary:</b>	The topic on requirements for the “structural serviceability” of cargo transport units is resumed considering recent decisions of the Sub-Committee of Experts on the Transport of Dangerous Goods at its fifty-sixth session.
<b>Action to be taken:</b>	Amendments of RID/ADR 7.1.4 and 7.3.1.13 are proposed.
<b>Related documents:</b>	Informal document INF.15 of the Joint Meeting autumn 2017 session (CEFIC); ECE/TRANS/WP.15/AC.1/2018/148, paragraph 31 (Report of the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods on its autumn 2017 session); ST/SG/AC.10/C.3/2019/40 (Germany, CEFIC), Sub-Committee of Experts on the Transport of Dangerous Goods, fifty-sixth session.

## **Introduction**

1. This document resumes the different scope of requirements of structural serviceability according to the Model Regulations sub-section 7.1.3.3.1 applicable for cargo transport units when used for the carriage of explosive substances and articles of Class 1 only, as adopted in IMDG-Code section 7.1.2, versus requirements for structurally serviceable large containers outlined in RID/ADR 7.1.4, generally applicable for the carriage of all classes. Thus, the

\* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2).

\*\* Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2020/24.

application of structural serviceability requirements is not harmonised across the different modes, with the sole exception of bulk containers or flexible bulk containers, prescribed in RID/ADR 7.3.1.13 and 7.3.2.10, included in the IMDG-Code accordingly.

## Background

2. The lack of harmonisation has been the subject of informal document INF.15 prepared by CEFIC for the RID/ADR/ADN Joint Meeting in September 2017 <sup>1</sup>. The Joint Meeting considered that CEFIC should first bring its concerns to the attention of the United Nations Sub-Committee of Experts, which would allow it to submit an official proposal taking into account the Sub-Committee's opinion (ECE/TRANS/WP.15/AC.1/2018/148).

3. At the fifty-sixth sessions of the Sub-Committee, the experts from Germany and CEFIC jointly presented proposals for a harmonisation of the requirement "structurally serviceable" for all containers (ST/SG/AC.10/C.3/2019/40 <sup>2</sup>). Most of the delegations considered that the existing differences between the requirements for "structural serviceability" of cargo transport units for the carriage of explosives with respect to other classes were not justified and welcomed a harmonized approach across the modes. The proposed amendments of the respective sections of the UN Model Regulations were finally adopted without further changes.

## Conclusion

4. All cargo transport units used for the transport of dangerous goods should be structurally serviceable, i.e. the current approach of RID/ADR needs to be maintained. However, the definition of "structurally serviceable" should be amended considering the technical development during recent years. References to dents or bends greater than 19 mm in depth and to splices should be deleted. There is no technical justification for the 19 mm criterion and the application leads to problems in practice as it contradicts the "Recommendations on harmonized interpretation and implementation of the International Convention for Safe Containers, 1972" updated 2013, including guidance on serious structural deficiencies in containers (IMO Circular CSC.1/Circ.138/Rev.1).

5. Based on the recently adopted text drafted for the twenty-second revised edition of the UN Model Regulations (as of 2021) on the requirement "structurally serviceable" for cargo transport units applied for the carriage of all classes of dangerous goods, amendments of the related sections of RID/ADR are proposed.

## Proposal

6. Amend 7.1.4 ADR to read as follows, specific text for RID in [square brackets] (deleted text is marked as ~~strike through~~; new text is underlined):

"7.1.4 ~~A large container may be presented for carriage only if it is structurally serviceable.~~

~~"Structurally serviceable" means that the container is free from major defects in its structural components, e.g. top and bottom side rails, doorsill and header, floor cross members, corner posts, and corner fittings. "Major defects" are dents or bends in structural members greater than 19 mm in depth, regardless of length; cracks or breaks in structural members; more than one splice or an improper splice (e.g. a lapped splice) in top or bottom end rails or door headers or more than two splices in any one top or bottom side rail or any splice in a door sill or corner post; door hinges and hardware that are seized, twisted, broken, missing or otherwise inoperative; non closing gaskets and seals; any distortion of the overall~~

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<sup>1</sup> <http://www.unece.org/fileadmin/DAM/trans/doc/2017/dgwp15a1/INF15e.pdf>

<sup>2</sup> <http://www.unece.org/fileadmin/DAM/trans/doc/2019/dgac10c3/2019-40e.pdf>

~~configuration sufficient to prevent proper alignment of handling equipment, mounting and securing on a chassis or wagon.~~

~~In addition, deterioration in any component of the container, such as rusted metal in side walls or disintegrated fibreglass is unacceptable, regardless of the material of construction. Normal wear, including oxidization (rust), slight dents and scratches and other damage that do not affect serviceability or weather tightness are, however, acceptable.~~

~~Prior to loading the container shall also be checked to ensure that it is free from any residue of a previous load and that the interior floor and walls are free from protrusions.~~

The interior and the exterior of a cargo transport unit shall be inspected prior to loading to ensure that there is no damage that could affect its integrity or that of the cargo to be loaded in it.

The cargo transport unit shall be checked to ensure it is structurally serviceable, that it is free of possible residues incompatible with the cargo and that the interior floor, walls and ceiling, where applicable, are free from protrusions or deterioration that could affect the cargo inside and that large containers are free of damages that affect the weather-tight integrity of the container, when required.

Structurally serviceable means that the cargo transport unit is free from major defects in its structural components. Structural components of cargo transport units for multimodal purpose are e.g. top and bottom side rails, top and bottom end rails, corner posts, corner fittings and, for large containers, door sill, door header and floor cross members. Major defects include:

- (a) Bends, cracks or breaks in structural or supporting members and any damage to service or operational equipment that affects the integrity of the unit;
- (b) Any distortion of the over-all configuration or any damage to lifting attachments or handling equipment interface features great enough to prevent proper alignment of handling equipment, mounting and securing on a chassis, vehicle or wagon, or insertion into ships' cells; and, where applicable;
- (c) Door hinges, door seals and hardware that are seized, twisted, broken, missing or otherwise inoperative.

NOTE: For filling portable tanks and UN multiple-element gas containers (MEGCs), see Chapter 4.2; for filling fixed tanks (tank-vehicles)[(tank-wagons)], demountable tanks, tank-containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles[battery-wagons] and multiple element gas containers (MEGCs), see Chapter 4.3; for filling fibre-reinforced plastics tanks[plastics tank-containers], see Chapter 4.4; for vacuum-operated waste tanks, see Chapter 4.5; for filling bulk containers, see Chapter 7.3.”

7. Amend 7.3.1.13 ADR to read as follows, specific text for RID in [square brackets] (deleted text is marked as ~~strike through~~; new text is underlined):

“7.3.1.13 Before a bulk container, container or vehicle[or wagon] is filled it shall be visually examined to ensure it is structurally serviceable, its interior walls, ceiling and floors are free from protrusions or damage that could affect the cargo and that any inner liners or substance retaining equipment are free from rips, tears or any damage that would compromise its cargo retention capabilities. Structurally serviceable means the bulk container, container or vehicle[or wagon] does not have major defects in its structural components, such as top and bottom side rails, top and bottom end rails, door sill and header, floor cross members, corner posts, and corner fittings

of a bulk container or container. Major defects~~[, where relevant to the means of transport concerned,]~~ include:

- (a) *Bends, cracks or breaks in the structural or supporting members and any damage to service or operational equipment that affects the integrity of the bulk container, container or of the body of the vehicle[~~of the wagon~~];*
- (b) *More than one splice or an improper splice (such as a lapped splice) in top or bottom end rails or door headers; Any distortion of the overall configuration or any damage to lifting attachments or handling equipment interface features great enough to prevent proper alignment of handling equipment, mounting and securing on a chassis, vehicle or wagon, or insertion into ships' cells; and, where applicable;*
- ~~(c) *More than two splices in any one top or bottom side rail;*~~
- ~~(d) *Any splice in a door sill or corner post;*~~
- (ec) *Door hinges, door seals and hardware that are seized, twisted, broken, missing, or otherwise inoperative.*
- ~~(f) *Gaskets and seals that do not seal;*~~
- ~~(g) *Any distortion of the overall configuration of a bulk container or container great enough to prevent proper alignment of handling equipment, mounting and securing chassis [or wagon] or vehicle[, or insertion into ships' cells];*~~
- ~~(h) *Any damage to lifting attachments or handling equipment interface features; or*~~
- (i) *Any damage to service or operational equipment.”*