

Economic and Social Council

Inland Transport Committee

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Working Party on the Transport of Dangerous Goods

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Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)

Forty-third session

Geneva, 22-26 January 2024

Item 5 (a) of the provisional agenda

Proposals for amendments to the Regulations annexed to ADN: work of the RID/ADR/ADN Joint Meeting

Consequential amendments to degree of filling and filling ratio

Submitted by Austria

Summary

Executive summary:	Amendments from the RID/ADR/ADN Joint Meeting and the Working Party on the Transport of Dangerous Goods (WP.15) were presented in document ECE/TRANS/WP.15/AC.2/2024/30. Among other things, the definitions for "degree of filling" (for solids and liquids) and for "filling ratio" (for gases) are adopted into the ADN. However, the ADN also contains a definition for "filling ratio (cargo tanks)", which needs to be revised as a result. For all references to the terms mentioned, it should be clarified which of the new terms is actually meant.
Action to be taken:	The discussion of the solution approach in this informal document, INF.9, forms the basis for the preparation of a formal amendment.
Related documents:	ECE/TRANS/WP.15/AC.2/2024/30 Informal document INF.11 from the forty-second session

Introduction

1. Document ECE/TRANS/WP.15/AC.2/2024/30 presented amendments from the RID/ADR/ADN Joint Meeting and from the Working Party on the Transport of Dangerous Goods (WP.15). Among other things, this document contains definitions for "degree of filling" (for solids and liquids) and for "filling ratio" (for gases), which are to be adopted in the ADN. As these terms are used in the harmonised parts of the ADN and also in the referenced parts 4 and 6 of the ADR and RID, it is necessary to incorporate these definitions into the ADN.

2. However, the ADN also contains a definition of "filling ratio (cargo tanks)" that differs from the harmonised definitions. In the ADN 2005, this definition still referred to a temperature of 15 °C. However, this reference temperature was already deleted in the first official edition of the ADN 2009. It is therefore no longer permitted to exceed the maximum permissible filling level mark when filling a cargo tank with a liquid with a temperature higher than 15 °C. If the definition "filling ratio (cargo tank)" were now

deleted, the situation prior to 2009 would be restored, which is not desirable. The temperature-independent definition "filling ratio (cargo tank)" should therefore be retained.

3. However, the two new, harmonised definitions make it clear that for liquids and solids a degree of filling in volume percentage is to be specified, while for gases a filling ratio in mass percentage is to be used. Previously, the German version of Table C used the term "maximal zulässiger Tankfüllungsgrad in %", which made it possible to use the definition "Füllungsgrad (Ladetank)" for liquids and the previous definition "Füllungsgrad" for gases, which referred to gases. As the second definition has now been changed to "filling factor", this interpretation is no longer possible. It is therefore necessary to clarify what column 11 refers to.

4. In the English version Table C uses "maximum degree of filling in %" while 1.2.1 is containing definitions for "Filling ratio" (for gases) and "Filling ratio (cargo tanks)". In the French version Table C uses "Degré maximal de remplissage en %" while 1.2.1 is containing definitions for "Taux de remplissage" (for gases) and "Taux de remplissage (citerne à cargaison)". A clarification is needed in both languages.

5. It should also be clarified for all other references to the terms mentioned which of the new terms is actually meant.

I. Proposal

6. 1.2.1. Definition of "*degree of filling*" add the following remark:

Note: For the degree of filling of cargo tanks, see degree of filling of a cargo tank."

7. 1.2.1. The definition "*filling ratio (cargo tanks)*" is replaced by: "*degree of filling of a cargo tank*: if a filling ratio is specified for cargo tanks for the carriage of liquid or molten substances, this refers to the percentage of the cargo tank volume that is filled with liquid. For the carriage of gases in pressurised tanks, the cargo tank filling factor is the ratio between the mass of gas and the mass of water at 15 °C that would completely fill the pressurised tank, which corresponds to a *filling ratio*."

8. 1.6.7.2.2.2: In the transitional provision for 9.3.3.21.1 b), "degree of filling" is replaced by "degree of filling of a cargo tank".

9. 2.2.2.1.1: "filling ratio" is replaced by "filling ratio, degree of filling of a cargo tank".

10. 3.2.3.1. Explanatory note to column (11). In the heading, "degree of filling" is replaced by "degree of filling of a cargo tank".

11. 3.2.3.1. Explanatory note no. 42 to column (20) "degree of filling" is changed to "degree of filling of a cargo tank".

12. 3.2.3.2. Table C, heading of column (11): "Maximum degree of filling in %". Replaced by "Maximum degree of filling of a cargo tank in %".

13. 3.3.1. Special Provision 392 letter f): (does not apply to the English version)

14. 7.2.4.16.17, third indent: "degree of filling" is replaced by "degree of filling of a cargo tank".

15. 7.2.4.21.1: "The degree of filling given in column (11) of Table C of Chapter 3.2 or calculated in accordance with 7.2.4.21.3 for the individual cargo tank shall not be exceeded." is replaced by "The degree of filling of a cargo tank given in column (11) of Table C of Chapter 3.2 or calculated in accordance with 7.2.4.21.3 shall not be exceeded."

16. 7.2.4.21.2: "degree of filling" is replaced by "degree of filling of a cargo tank" (twice).

17. 7.2.4.21.3 already refers to "degree of filling of the cargo tank" in the introductory sentence. In the following and in 7.2.4.21.4, "degree of filling" is used. As the term here is clearly linked to the introductory sentence, it does not appear necessary to replace it each time with "degree of filling of the cargo tank".

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18. 8.2.2.3.3.1: "degree of filling" is replaced by "degree of filling of a cargo tank" (twice).
 19. 8.2.2.3.3.2: "degree of filling" is replaced by "degree of filling of a cargo tank" (twice).
 20. 9.1.0.40.2.10, 9.1.0.40.2.11, 9.1.0.40.2.13, 9.3.x.40.2.10, 9.3.x.40.2.11, 9.3.x.40.2.13: (does not apply to the English version)
 21. 9.3.1.21.1 (c) and (d): "degree of filling" is replaced by "degree of filling of the cargo tank".
 22. 9.3.1.21.2: "degree of filling" is replaced by "degree of filling of a cargo tank".
 23. 9.3.2.21.1 (a): "liquid level" is replaced by "degree of filling of the cargo tank";
 24. 9.3.2.21.1 (c) and (d): "degree of filling" is replaced by "degree of filling of a cargo tank".
 25. 9.3.2.21.2: "degree of filling" is replaced by "degree of filling of the cargo tank".
 26. 9.3.3.21.1 (a): "liquid level" is replaced by "degree of filling of the cargo tank";
 27. 9.3.3.21.1 (c) and (d): "degree of filling" is replaced by "degree of filling of a cargo tank".
 28. 9.3.3.21.2: "Filling level" is replaced by "Filling level of the cargo tank".

II. Justification

Safety:

29. The editorial changes ensure that the introduction of new definitions has no impact on safety.

Transition period:

30. No transition period is required.

Enforceability:

31. The text is made clearer by the editorial changes.
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