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Inland Transport Committee

Working Party on the Transport of Dangerous Goods

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-fourth session
Geneva, 26–30 August 2024
Item 5 of the provisional agenda
Reports of informal working groups.

Report of the fourth meeting of the informal working group on loading and unloading instructions

Transmitted by the Government of the Netherlands[*, **]

Summary

Related documents:	Informal document INF.12 of the thirty-fourth session
	ECE/TRANS/WP.15/AC.2/70 (Paragraphs 16-17)
	Informal document INF.9 of the thirty-fifth session
	ECE/TRANS/WP.15/AC.2/72 (Paragraphs 14-16)
	ECE/TRANS/WP.15/AC.2/2020/37
	ECE/TRANS/WP.15/AC.2/76 (Paragraphs 71-72)
	ECE/TRANS/WP.15/AC.2/2021/26
	ECE/TRANS/WP.15/AC.2/78 (Paragraphs 35-36)
	ECE/TRANS/WP.15/AC.2/2022/14
	ECE/TRANS/WP.15/AC.2/80 (Paragraph 66)
	Informal document INF.13 of the fortieth session
	ECE/TRANS/WP.15/AC.2/82 (Paragraph 68)
	ECE/TRANS/WP.15/AC.2/2023/41

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** A/78/6 (Sect. 20), table 20.5

ECE/TRANS/WP.15/AC.2/86 (Paragraph 74)

ECE/TRANS/WP.15/AC.2/2024/12

ECE/TRANS/WP.15/AC.2/88 (Paragraph 69)

Introduction

1. The informal working group on loading and unloading instructions held its fourth meeting on 9–10 April 2024 in The Hague (Netherlands). Members of the Dutch, German and Luxembourg delegations, and representatives of Cefic, EBU, ESO, FuelsEurope, VOTOB and Lloyds Register attended the meeting. The informal working group continued its discussions on the items that were agreed to be the terms of reference during the thirty-ninth session of the ADN Safety Committee.

2. Safe loading and unloading flow rates prevent the build-up of electrostatic charges and ultimately, potential explosions. Furthermore, safe loading flows prevent the build-up of overpressure in tanks, as well as build-up of undesirable under-pressure during unloading. A single practical document should be on board of vessels which states the maximum safe loading and unloading flow rates to prevent that higher than safe loading flow rates are agreed upon before loading and unloading. This document is the loading and unloading instruction.

I. The process of drawing up a loading and unloading instruction

3. The group briefly recalled the process of drawing up a loading and unloading instruction discussed during the last meeting. A separation between the "vessel bound information" and the "operation document (the loading and unloading instruction)" would enable the group to require the approval/verification of the classification societies on the vessel bound information. The carrier should be responsible for drafting the loading and unloading instruction on the basis of the vessel bound information, provided by the ship builder or the wharf respectively, and subsequently verified by the classification societies, which supervises the vessel. The loading and unloading instruction should be a single, practical, document that could be used to determine the safe loading flow rates for all cargoes for the vessel.

4. The group confirmed that the vessel bound data should include the following items:

(a) The configuration of the piping for loading and unloading, including the length and the diameter of the piping;

(b) The configuration of the venting piping, including the length and the diameter of the piping;

(c) The distance between the opening of the piping for loading and the bottom of the cargo tank;

(d) Whether the opening of the piping for loading is vertical or horizontal; and

(e) The information on the equipment connected to the pipings and cargo tanks, including the information on the flame arresters and the information on the (configuration of) the pressure relief valves (autonomous protection systems).

5. Based on this information, the carrier should draw up the loading and unloading instruction. The loading and unloading instruction should include:

(a) The maximum safe loading flow rate in m^3/h for the initial phase;

(b) The maximum safe loading flow rate in m^3/h for the middle phase; and

(c) The minimum volume in m^3 of cargo that should be loaded during the initial phase.

6. The maximum safe loading flow rate should be based on the maximum safe loading flow velocity described in the International Safety Guide for Inland Navigation Tank-Barges and Terminals (ISGINNT) 3.2.1, 7.3.3.2, 11.1.7 (i.e. 1 m/s for the initial phase and 7 m/s for the middle phase). For the middle phase the maximum safe loading velocity should also be limited by the maximum flow of vapours/gasses through the venting piping.

II. Work on proposals for amendments

7. The group started drawing up proposals for amendments to the ADN to reflect the described process of drawing up a loading and unloading instruction. During these discussions the group concluded that the document should be renamed (in the English version) to the "Instruction on the loading and unloading flow rate". This would ensure that the document clearly indicates the correct maximum loading flow rate in m^3/h.

8. The group had a discussion on where the vessel bound data could be reflected. This could be reflected in a new document ("vessel bound data for loading and unloading instruction"). However, the group also investigated whether the information could be added to the "vessel substance list" of 1.16.1.2.5. The added benefit of incorporating the information in the vessel substance list would be that the ADN recognized Classification Societies already have processes in place to verify the information necessary to draw up the vessel substance list (such as the material of the tank, whether tanks are coated, etc.).

9. The informal working group agreed that the drafts proposals for amendments would need further work before it can be presented as a complete and comprehensive list of proposed amendments to the ADN Safety Committee. Attached to this document is the list of places in the ADN where the informal working group is considering amendments, or which are relevant to our work (see annex).

III. Next meeting

10. If the ADN Safety Committee can endorse the proposed process for the drafting of the loading and unloading instructions, including the division of responsibilities and the items to be considered during the different steps in the process, the informal working group would like to continue drafting proposals for amendment of the ADN to reflect these considerations during the next meeting of the group.

11. The next meeting of the informal working group will be on 17–18 September 2024 in The Hague (Netherlands).

IV. Action to be taken

12. The ADN Safety Committee is requested to consider the report of the informal working group, and to take action as it deems appropriate.

Annex

1.2.1	Definition of the loading and unloading instructions
1.4.2.2.1 (b) Obligations carrier	Carrier ascertain that documentation is on board
1.4.2.2.1 (l) Obligations carrier	Carrier should fill in 8.6.3, which contains question on loading flows
1.4.2.2.1	Drafting of the loading and unloading instructions (on the basis of the vessel bound data)
1.4.2.2.1	Carrier responsible for the unloading flows instead of the unloader.
1.4.3.3 (s) Obligations Filler	Filler has responsibility to ascertain that the loading flows conform to the instruction
1.4.3.7 (j) Obligations unloader	Unloader has responsibility to ascertain that the unloading flows conform to the instruction
1.16.1.2.5	Vessel substance list
7.2.4.16.1	Loading rate agreed with shore personnel (no unloading though)
7.2.4.16.15	Electrostatic charge
7.2.4.16.6	Pressure at the connecting point of vapour return piping and venting piping
8.1.2.3 (i)	Instructions should be on board
8.6.1.3 and 8.6.1.4 item 11	Model for (provisional) Certificate of approval for tank vessels
8.6.3	Rate of loading need to be agreed upon between master and person in charge at loading/unloading place
9.3.2/3.21.7	Alarm and automatic stop at 0.8 times the opening pressure?
9.3.2.25.9	Calculation
9.3.3.25.9	Calculation