

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)

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Item 8 of the provisional agenda

Special authorizations, derogations and equivalents

**Comments on documents
ECE/TRANS/WP.15/AC.2/2012/24 and
WP.15/AC.2/21/INF.4**

**Application for a special authorization for the transport
of UN 1972 and a proposal for the entry in Table C**

Transmitted by the Government of France

Summary

Executive summary: Comments on documents ECE/TRANS/WP.15/AC.2/2012/24 and WP.15/AC.2/21/INF.4.

Action to be taken: Paragraphs 8, 9 and 10 below.

Related documents: ECE/ADN/18 - Draft amendments to the Regulations annexed to ADN

DISCLAIMER

This document is a free translation of document WP15-AC2-21-INF.19 in French.
In case of doubt, please refer to the original version in French.

Introduction

1. By documents ECE/TRANS/WP.15/AC.2/2012/24 and WP.15/AC.2/21/INF.4, the Government of the Netherlands asks for a special authorization for the transport in tank vessels of UN No. 1972, and proposes the inclusion of this substance in Table C of Chapter 3.2. The present informal document summarizes the French reactions to this request and this proposal.
2. An examination of Table C of Chapter 3.2 shows that, except for UN No. 1038, ETHYLENE REFRIGERATED LIQUID, none of the “refrigerated liquefied gases” (Classification code 3A or 3O or 3F) is allowed to be transported in tank vessels. Thus, there is a lack of the necessary “experience” of this type of transport.
3. Moreover, document WP.15/AC.2/21/INF.4 indicates that the tanks intended to be used for this transport have a capacity of 730 m³, e.g. close to double the maximum permissible capacity (380 m³) allowed by 9.3.1.11.1 of the Regulations annexed to ADN.

4. The request of the Netherlands would thus lead the Safety Committee to pronounce on two derogations or authorizations (one for transport and the other for the capacity of the tanks) instead of only one.

5. Regarding the exceeding of the maximum volume authorized for tanks, document WP.15/AC.2/21/INF.4 indicates that, in terms of "more crashworthy side structure", 9.3.4 (and more precisely 9.3.4.1.2) of the Regulations annexed to ADN is applicable. This side structural strength is a passive protection against collisions.

However, neither the calculation procedure of 9.3.4.3 of the Regulations annexed to ADN, nor the evidence of compliance with the provisions of 9.3.4.3 (as required in 9.3.4.1.3), nor the documentation relating to the application of 9.3.4.3 (as required in 9.3.4.1.4), is submitted.

6. Document WP.15/AC.2/21/INF.4 is rather detailed regarding cargo tank equipment but remains succinct regarding tanks construction. The only information provided relates to:

- Materials used, design, execution, inspection and testing shall be according to Class Rules and ADN requirements (document WP.15/AC.2/21/INF.4, paragraph 1.1); it is supposed that these provisions also apply to cargo tanks;
- Cargo tanks shall be made from steel which is resistant to low cargo temperatures (document WP.15/AC.2/21/INF.4, paragraph 3.3).

7. Regarding cargo tank construction, and inspections and tests, Chapter 6.1 of the Regulations annexed to ADN makes mandatory the provisions and requirements of Chapters 6.1 to 6.12 of ADR. For instance, for construction and inspections and tests of cryogenic vessels, 6.8.2.6 of ADR makes applicable standard "EN 13530-2:2002 + A1:2004".

Considering paragraph 6 above, it may be supposed that cargo tank construction complies with the relevant provisions of ADR, but the documents submitted by the Government of the Netherlands are not fully explicit on this point.

8. Finally, the comparison between the requirements for transport by tank vessel for UN No. 1038 and those proposed for UN No. 1972 leads to the following remarks (refer to the comparison table below):

- Taking into account the particulars of each of the two gases (For UN No. 1038 Freezing point: -169°C / Boiling point: -103°C – For UN No. 1972 Freezing point: -182°C / Boiling point: -161.5°C), it seems surprising that a refrigeration system (figure 1 in column (9)) is not required for transport of UN No. 1972;
- In column (20) – "Additional requirements / Remarks", reference is made to note 40, which appears on page 9 of document WP.15/AC.2/21/INF.4. The choice of number 40 presents a risk of confusion with the same number item which is intended to be added in the "Additional requirements" of column (20) by the "Draft amendments to the Regulations annexed to ADN" included in document ECE/ADN/18.

It would be preferable to use another number than 40 (or using another means of identification) to qualify the additional requirements relating to transport of UN 1972 by a cargo tank vessel.

UN No. or substance identification No.	Name and description	Class	Packing group	Dangers	Type of tank vessel	Cargo tank design	Cargo tank type	Cargo tank equipment	Opening pressure of the high-velocity vent valve in kPa	Maximum degree of filling in %	Relative density at 20 °C	Type of sampling device	Pump-room below deck permitted	Temperature class	Explosion group	Anti-explosion protection required	Equipment required	Number of cones/blue lights	Additional requirements / Remarks	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1038	ETHYLENE, REFRIGERATED LIQUID	2	3F		2.1	G	1	1	1	95		1	no	T1	II B	yes	PP, EX, A	1	31	
1972	METHANE, REFRIGERATED LIQUID or LIQUEFIED NATURAL GAS, REFRIGERATED, with high content of methane)	2	3F		2.1	G	1	1				1	no	T1	II A	yes	PP, EX, A	1	2, 31, 40	

Proposition

Taking in to account the above comments and the remaining uncertainties, it seems to be too early for the Safety Committee to take a comprehensive decision, either positive or negative, relating to the requests of the Government of the Netherlands which are the object of document ECE/TRANS/WP.15/AC.2/2012/24.

9. Thus, France recommends that the conditions of transport of UN No. 1972 by cargo tank vessel are examined again, taking into account the remarks in paragraph 8 above.

10. France recommends, too, *that standards of construction, inspections and tests, and that implementation of 9.3.4.3 of the Regulations annexed to ADN be submitted to the "Working Group of Tanks" of the RID/ADR/ADN Joint Meeting*, in order to:

- Ensure that standards of construction, inspections and tests comply with the relevant provisions of Chapters 6.1 to 6.12 of ADR, made mandatory by Chapter 6.1 of the Regulations annexed to ADN, or, at least, to ensure that the standards used in document WP.15/AC.2/21/INF.4 are equivalent to these standards (see paragraphs 6 and 7 above);
- Ensure that the provisions of 9.3.4.3 of the Regulations annexed to ADN are fully implemented and in compliance, allowing the validation of the use of cargo tanks whose capacity is much larger than the maximum permissible capacity (see paragraph 5 above).

11. The Safety Committee is invited to examine the information contained in the present document and to take the appropriate action.