
Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods**

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English

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)**Thirty-seventh session**

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Item 4 (c) of the provisional agenda

Implementation of the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN): interpretation of the Regulations annexed to ADN

Sub-section 8.1.2.2 of ADN – Documents which must be carried on board dry-cargo vessels - Anti-explosion protection**Submitted by Germany****Introduction**

1. The German delegation was approached by the inland waterway transport sector with the question of interpretation below.
2. Paragraphs 8.1.2.2 (e), (g) and (h) of ADN prescribe that various plans and lists regarding the designated explosion protection zones on board the ship and the installations and equipment used in these zones must be carried on board dry-cargo vessels.
3. As per its wording, the definition of the term “classification of zones” in section 1.2.1 of ADN refers exclusively to tank vessels.
4. The question arises whether and if so how explosion protection zones must be designated on board dry-cargo vessels.

Interpretation of the provisions

5. Section 1.2.1 of ADN contains a definition of the term “protected area” which refers to dry-cargo vessels. In this definition, reference is made to areas “comparable to zone 1” and “comparable to zone 2”, **“when anti-explosion protection is required”**.
6. Up to ADN 2017, the cargo area and the “protected area” were defined as “comparable to zone 1” and “comparable to zone 2” without this restriction. No detailed justification for this additional clause could be found in any session document.
7. In line with this, there are the construction requirements 9.1.0.12.3 (v) 1., 9.1.0.12.5, 9.1.0.53.1, 9.1.0.53.6 of ADN which require certain installations and equipment to be suitable at least for use in zone 1.
8. The definition of “Classification of explosion hazardous areas” in section 1.2.1 of ADN indicates in which areas an explosion protection zone 1 or 2 can generally be expected.
9. At present, Germany cannot provide an answer to the question for which dangerous goods in particular or in general “anti-explosion protection is required” for carriage in dry-cargo vessels.

10. Unlike in Table C which applies to the carriage of dangerous goods in tank vessels, Table A does not contain a separate column with the information “Anti-explosion protection YES/NO” for packages and goods carried in bulk. We could not find any other passages in the ADN, either, which explicitly answer this question.

11. The first indication might be found in column (9) of Table A: Anti-explosion protection is required for the carriage of goods for which gas detection equipment “EX” must be carried on board. These are dangerous goods of Classes 2, 3, 4.3, 5.2, 6.1, and 8. – See also first indent of the sixth sentence of 7.1.3.51.2. This would be very suitable for practical application.

12. A second indication might be found in column (12) of Table A: If 3 cones/lights are prescribed there, anti-explosion protection is required. In accordance with Section 3.14 of CEVNI (or the corresponding navigational authority regulations of the CCNR), 3 cones/lights are required if certain explosive substances are carried. These are goods of Class 1 as well as four goods of both Class 4.1 and 5.2, each with subsidiary hazard of Class 1.

EX equipment is only required for goods of Class 5.2.

13. A third indication might be found in Table C: for all substances for which anti-explosion protection is required in accordance with column (17) of Table C for the carriage in tank vessels, anti-explosion protection is also required for the carriage in packages such as tank containers or IBCs. These are goods of Classes 2, 3, 4.1 (only UN 3175 SOLIDS CONTAINING FLAMMABLE LIQUID, having a flash-point up to 60 °C, N.O.S., MOLTEN (DIALKYL-(C12 to C18)-DIMETHYLAMMONIUM CHLORIDE AND 2-PROPANOL), of Class 6.1 with and without subsidiary hazard of Class 3, of Class 8 with and without subsidiary hazard of Class 3.

The problem is that the criteria for entering “YES” in column (17), which can be found in 3.2.3.3 of ADN, only seem appropriate for liquid dangerous goods.

13. A fourth indication might be found in the instructions in writing in accordance with section 5.4.3 of ADN: Anti-explosion protection is required for all classes which are “Explosive substances and articles” or for which the hazard characteristic “Risk of explosion” is indicated in column (2) of the instructions in writing. This would apply to Classes 1, 1.4, 1.5, 1.6, 2.1, 3, 4.1, 4.3, 5.1 and 9.

14. A fifth indication might be found in 7.1.4.4.4 of ADN where electrical installations and equipment which are not appropriate at least for use in zone 1 are linked to certain hazard classes. These are Class 2 with dangerous goods label 2.1, Class 3 PG I or II, Class 4.3, Class 6.1 PG I or II with subsidiary hazard of Class 4.3, Class 8 PG I with subsidiary hazard of Class 3, Class 8 PG I or II with subsidiary hazard of Class 4.3.

Para.	Anti-explosion protection for dangerous goods of Class												
10.					2	3		4.3		5.2	6.1	8	
11.	1						4.1+1			5.2+1			
12.					2	3	4.1 (1x)				6.1	8	
13.	1	1.4	1.5	1.6	2/2.1	3	4.1	4.3	5.1				9
14					2/2.1	3 I/II		4.3			6.1 I/II+4.3	8 I+3; 8 I/II+4.3	

Proposal

15. Germany is asking the Safety Committee to address this question of interpretation and to discuss whether an additional column should be inserted in Table A of ADN with the indication “Anti-explosion protection required” or whether the anti-explosion protection requirement with regard to carriage in dry-cargo vessels could be described in general in an appropriate place in the text.

Germany is willing to formulate the proposal for amendment to the ADN that may be required, depending on the outcome of the discussions.
