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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)

Twentieth session
Geneva, 23–27 January 2012
Item 4 (b) of the provisional agenda
Proposals for amendments to the Regulations annexed to ADN: Other proposals

Means of evacuation[1, 2]

Transmitted by the Government of the Netherlands

I. Introduction

1. Based on the terms of reference adopted by the Administrative Committee an informal working group held three working sessions and one drafting session to develop a framework in accordance with ADN to improve the availability of means of evacuation in cases of emergency and to clarify the responsibilities of the parties involved.

2. Representatives of Austria, Germany, Belgium, France, Switzerland, Netherlands, European Barge Union (EBU), Federation of European Tank Storage Associations (FETSA), European Chemical Industry Council (CEFIC) and representatives of chemical and oil companies participated.

3. In general, the discussions in the informal working group resulted in a systematic approach in which the type of cargo, the type of ship, circumstances at the terminal or circumstances when transferring cargo from one ship to another form a framework for determining what type of means of evacuation can be used. This leads to a high degree of flexibility.

[1] Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2012/16.

[2] In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, programme activity 02.7 (b)).

4. As to the responsibilities of the parties involved proposals were developed for clarification of responsibilities at the landside and on the shipside.

5. The results of the informal working group comprise proposals to:

Amend Definitions in Part 1, Chapter 1.2.1;

Amend Part 1, Chapter 1.4.3;

Amend Part 7, Chapter 7.1.4 and Chapter 7.2.4;

Amend Part 8, Chapter 8.6.3.

6. The proposals were discussed during the meeting of the Safety Committee at its nineteenth session in August 2011. The Committee expressed its satisfaction with the work and the proposal delivered.

7. Some delegates, however, have expressed concerns about the feasibility of safe havens in case of fire. On second thought, the informal working group came to the conclusion that indeed in these circumstances a safe haven is not acceptable as a means of evacuation. For that reason the definition of safe havens has been changed.

II. Proposals for amendments

A. Part 1, Chapter 1.2.1

8. Add the following definitions:

"*Means of evacuation*: any means that can be used by people to move from danger to safety. Dangers that have to be taken into account are:

- For class 3, packing group III, UN 1202, second and third entry and for classes 4.1, 8 and 9 on tank vessels: leakage at the manifold;
- For other substances of class 3 and class 2 and for flammable substances of class 8 on tank vessels: fire in the area of the manifold on the deck and burning liquid on the water;
- For class 5.1 on tank vessels: oxidizing substances in combination with flammable liquids may cause an explosion;
- For class 6.1 on tank vessels: toxic gases around the manifold and in the direction of the wind;
- For dangerous goods on dry cargo vessels: dangers emanating from the goods in the cargo holds."

"*Escape route*: Is a safe route from danger towards safety or to a means of evacuation."

"*Escape boat*: Is a specially equipped onsite boat designed to withstand all identified hazards of the cargo and to evacuate the people in danger."

"*Evacuation boat*: Is a specially equipped and manned boat called in for rescuing people in danger."

"*Life boat*: Is an onboard boat for use in transport, rescue, salvage and work duties."

"*Safe haven*: Is a module (fixed or floating) that must be capable of protecting people from all identified hazards of the cargo for a predetermined period of time. A safe haven on land must be constructed according to local law. A safe haven on

board must be certified by a recognised classification society. A safe haven on board is not acceptable when the identified danger is fire or explosion."

"*Safe area*: Is an area outside the cargo area protected against all identified hazards of the cargo by a water screen."

B. Part 1, Chapter 1.4.3

9. Amend the following paragraphs to read:

"1.4.3.1 (f)

He shall ascertain that the landside installation is equipped with one or two means for evacuation from the ship in the event of an emergency (see 7.1.4.77 and 7.2.4.77). In case of transfer of cargo from one ship to another ship, he shall ascertain that means for evacuation in the event of an emergency (see 7.1.4.77 and 7.2.4.77) are available.".

"1.4.3.3 (q)

He shall ascertain that the landside installation is equipped with one or two means for evacuation from the ship in the event of an emergency (see 7.1.4.77 and 7.2.4.77). In case of transfer of cargo from one ship to another ship, he shall ascertain that means for evacuation in the event of an emergency (see 7.1.4.77 and 7.2.4.77) are available.".

"1.4.3.7.1 (h)

He shall ascertain that the landside installation is equipped with one or two means for evacuation from the ship in the event of an emergency (see 7.1.4.77 and 7.2.4.77). In case of transfer of cargo from one ship to another ship, he shall ascertain that means for evacuation in the event of an emergency (see 7.1.4.77 and 7.2.4.77) are available.".

"1.4.2.2.1 (d)

He shall ascertain that a second means for evacuation in the event of an emergency (see 7.1.4.77 and 7.2.4.77) from the shipside [in accordance with Part 9] is available, when the landside installation is not equipped with a second required means of evacuation. In case of transfer of cargo from one ship to another ship, he shall ascertain that means for evacuation in the event of an emergency (see 7.1.4.77 and 7.2.4.77) are available.".

C. Part 7 Chapter 7.1.4 and Chapter 7.2.4

10. Add the following table to 7.1.4

7.1.4.77 Possible means of evacuation in case of an emergency

		Dry cargo bulk (vessel and barge)		*Container (vessel and barge) and packaged goods*
		Ship-shore/ship-ship		*Ship-shore/ship-ship*
		Class		*Class*
		4.1, 4.2, 4.3	*5.1, 6.1, 7, 8, 9*	*All classes*
1	Two escape routes inside or outside the cargo area in opposite directions		•	•
2	One escape route outside the cargo area and one safe haven outside the vessel including the escape route towards it at the opposite end	•	•	•
3	One escape route outside the cargo area and one safe haven on the vessel at the opposite end	•	•	•
4	One escape route outside the cargo area and one life boat at the opposite end	•	•	•
5	One escape route outside the cargo area and one escape boat at the opposite end	•	•	•
6	One route inside the cargo area and one escape route outside the cargo area at the opposite end	•	•	•
7	One escape route inside the cargo area and one safe haven outside the vessel in the opposite direction	•	•	•
8	One escape route inside the cargo area and one safe haven on the vessel in the opposite direction	•	•	•
9	One escape route inside the cargo area and one life boat at the opposite end	•	•	•
10	One escape route inside the cargo area and one escape boat at the opposite end	•	•	•
11	One escape route inside or outside the cargo area and two safe havens on the vessel at opposite ends	•	•	•
12	One escape route inside or outside the cargo area and two safe areas on the vessel at opposite ends	•	•	•
13	One escape route outside the cargo area	•	•	•
14	One escape route inside the cargo area	•	•	•
15	One or more safe havens outside the vessel, including the escape route towards it	•	•	•
16	One or more safe havens on the vessel	•	•	•
17	One or more escape boats	•	•	•

		Dry cargo bulk (vessel and barge)		*Container (vessel and barge) and packaged goods*
		Ship-shore/ship-ship		*Ship-shore/ship-ship*
		Class		*Class*
		4.1, 4.2, 4.3	*5.1, 6.1, 7, 8, 9*	*All classes*
18	One escape boat and one evacuation boat	•	•	•
19	One or more evacuation boats		•	•

• = Possible option

11. Add the following table to 7.2.4

7.2.4.77 Possible means of evacuation in case of an emergency

		Tank vessel/tank barge									
		Ship-shore					*Ship-ship, given that the boarded ship in itself is not safe; only applies to inland navigation vessels*				
		Class					*Class*				
		2, 3 packing group I, II and rest of III	*3 packing group III (UN 1202 two entries: second and third), 4.1*	*5.1 6.1*	*8*	*9*	*2, 3 packing group I, II and rest of III*	*3 packing group III (UN 1202 two entries: second and third), 4.1*	*5.1 6.1*	*8*	9
1	Two escape routes inside or outside the cargo area in opposite directions from the manifold in use	•	•	•	•	•	•	•	•	•	•
2	One escape route outside the cargo area and one safe haven outside the vessel including the escape route towards it from the opposite end	•	•	•	•	•	•	•	•	•	•
3	One escape route outside the cargo area and one safe haven at the opposite end	•	•	•	•	•	•	•	•	•	•
4	One escape route outside the cargo area and one life boat at the opposite end		•		•	•		•		•	•
5	One escape route outside the cargo area and one escape boat at the opposite end	•	•	•	•	•	•	•	•	•	•

		Tank vessel/tank barge									
		Ship-shore					*Ship-ship, given that the boarded ship in itself is not safe; only applies to inland navigation vessels*				
		Class					*Class*				
		2, 3 packing group I, II and rest of III	*3 packing group III (UN 1202 two entries: second and third), 4.1*	*5.1 6.1*	*8*	*9*	*2, 3 packing group I, II and rest of III*	*3 packing group III (UN 1202 two entries: second and third), 4.1*	*5.1 6.1*	*8*	9
6	One escape route inside the cargo area and one escape route outside the cargo area at the opposite end	•	•	•	•	•	•	•	•	•	•
7	One escape route inside the cargo area and one safe haven outside the vessel in the opposite direction	•	•	•	•	•	•	•	•	•	•
8	One escape route inside the cargo area and one safe haven in the opposite direction	•	•	•	•	•	•	•	•	•	•
9	One escape route inside the cargo area and one life boat at the opposite end		•		•	•		•		•	•
10	One escape route inside the cargo area and one escape boat at the opposite end	•	•	•	•	•	•	•	•	•	•
11	One escape route inside or outside the cargo area and two safe havens on the vessel at opposite ends	•	•	•	•	•	•	•	•	•	•
12	One escape route inside or outside the cargo area and two safe areas on the vessel at opposite ends	•	•	•	•	•	•	•	•	•	•
13	One escape route outside the cargo area		•		* •	•		•		* •	•
14	One escape route inside the cargo area		•		* •	•		•		* •	•
15	One or more safe havens outside the vessel, including the escape routes towards them	•	•	•	* •	•	•	•	•	* •	•

		Tank vessel/tank barge									
		Ship-shore					*Ship-ship, given that the boarded ship in itself is not safe; only applies to inland navigation vessels*				
		Class					*Class*				
		2, 3 packing group I, II and rest of III	*3 packing group III (UN 1202 two entries: second and third), 4.1*	*5.1 6.1*	*8*	*9*	*2, 3 packing group I, II and rest of III*	*3 packing group III (UN 1202 two entries: second and third), 4.1*	*5.1 6.1*	*8*	9
16	One safe haven on the vessel							•		•	•
17	Two safe havens on the vessel						•	•	•	•	•
18	One escape boat							•		•	•
19	Two escape boats						•	•	•	•	•
20	One escape boat and one evacuation boat							•		•	•
21	One or more evacuation boats									•	•

• = Possible option.

* In case of classification codes TFC, CF or CFT not acceptable.

D. Part 8, Chapter 8.6.3

Page 1, ADN Checklist

12. Replace "(shore loading or unloading installation)" by "(shore loading or unloading installation, or name of loading or unloading vessel)".

Page 3, ADN Checklist

13. Replace "Loading/unloading place" by "Loading/unloading place or vessel".

Question 1

14. Replace "Is the vessel permitted to carry the cargo?".

By "Is the loading vessel permitted to carry the cargo?".

Question 3

15. Replace "Is the vessel well moored in view of local circumstances?".

By "Is the vessel well moored in view of local circumstances?/Is the vessel well connected in view of local circumstances?".

Question 4

16. Replace "at the fore and at the aft of the vessel".

By "Have suitable means in accordance with 7.1.4.77 and 7.2.4.77 been provided for boarding or leaving, including in cases of emergency?"

Explanation of question 4

17. Replace "(e.g. a lowered dinghy)".

By "none or".

Add "if required in accordance with 7.1.4.77 and 7.2.4.77."

Question 6

18. Add an additional category "In case of vessel/vessel connection:"

6.1 Are the cargo hoses between the vessels in satisfactory condition?

Are these hoses correctly connected?

6.2 Are all the connecting flanges fitted with suitable gaskets?

6.3 Are all the connecting bolts fitted and tightened?

Explanation of question 6

19. Replace "The cargo transfer hoses between vessel and shore must be placed so that they cannot be damaged by variations of the water-level, passing vessels and/or loading/unloading operations.".

By "The cargo transfer hoses between vessel and shore – or vessel and vessel – must be placed so that they cannot be damaged by variations of the water-level, passing vessels and/or loading/unloading operations.".

Explanation of question 10

20. Replace "Loading/unloading must be supervised on board and ashore so that dangers which may occur in the vicinity of cargo hoses can be recognized immediately. When supervision is effected by additional technical means it must be agreed between the shore installation and the vessel how it is to be ensured.".

By "Loading/unloading must be supervised on board (both vessels) and ashore so that dangers which may occur in the vicinity of cargo hoses can be recognized immediately. When supervision is effected by additional technical means it must be agreed between the shore installation and the vessel/the two vessels how it is to be ensured.".

Question 11

21. Replace "Is communication between vessel and shore ensured?".

By "Is communication between vessel(s) and shore ensured?".

Explanation of question 11

22. Replace "For a safe loading/unloading operation good communications between vessel and shore are required. For this purpose telephone and radio equipment may be used only if of an explosion protected type and located within reach of the supervisor.".

By "For a safe loading/unloading operation good communications between vessel and shore/both vessels are required. For this purpose telephone and radio equipment may be used only if of an explosion protected type and located within reach of the supervisor.".

Question 12.2

23. Replace "Is it ensured that the shore installation is such that the pressure at the connecting point cannot exceed the opening pressure of the high-velocity vent valves?".

By "Is it ensured that the shore installation (if present) is such that the pressure at the connecting point cannot exceed the opening pressure of the high-velocity vent valves?".

Question 12.3

24. Replace "When anti-explosion protection is required in Chapter 3.2, Table C, column (17) does the shore installation ensure that its venting pipe or pressure compensation pipe is such that the vessel is protected against detonations and flame fronts from the shore?".

By "When anti-explosion protection is required in Chapter 3.2, Table C, column (17) does the shore installation (if present) ensure that its venting pipe or pressure compensation pipe is such that the vessel is protected against detonations and flame fronts from the shore?".

Explanation of question 13

25. Replace "Before the start of the loading/unloading operation the representative of the shore installation and the master or the person mandated by him must agree on the applicable procedure.".

By "Before the start of the loading/unloading operation the representative of the shore installation and the master or the person mandated by him – or in case of vessel/vessel loading the masters of both vessels – must agree on the applicable procedure.".

Signature box:

26. Replace "For the installation of loading and unloading".

By "For the installation of loading and unloading/vessel".