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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)

Twenty-fourth session

Geneva, 27–31 January 2014

Item 5 (b) of the provisional agenda

**Proposals for amendments to the Regulations annexed to ADN:
Other proposals**

Means of evacuation

Transmitted by the European Barge Union (EBU)^{1,2}

Preliminary remarks

1. EBU requests a reconsideration of the existing texts on this subject, due to be incorporated in ADN 2015. It would appear that the German and English versions at least of the report circulated under symbol ECE/TRANS/WP.15/AC.2/42 are not in agreement in all respects (cf. definitions of escape boat, evacuation boat).
2. For various reasons the question of means of evacuation is of enormous importance to the inland navigation industry. EBU therefore considers that it would be sensible to invite other inland waterway experts to the twenty-fourth session. In order to allow preparations to be made, EBU requests that the discussion of this topic should be set for Wednesday, 29 January 2014 and that a decision to that effect should be taken when the agenda is considered on 27 January 2014.

¹ In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94, ECE/TRANS/2012/12, programme activity 02.7, (A1b)).

² Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2014/25.



Introduction

3. At the twentieth session of the ADN Safety Committee (23–27 January 2012), the following text was adopted:

“1.4.2.2.1 (d)

“[The carrier should] ascertain that a second means of evacuation in the event of an emergency from the vessel side is available, when the landside installation is not equipped with a second necessary means of evacuation.”

This text is due to enter into force on 1 January 2015.

4. When this decision was taken, EBU was still proceeding from the assumption that a safe area created by a water screen constituted a means of evacuation. That view was shown to be wrong at the Safety Committee’s twenty-third session in August 2013, when it was decided that neither a safe area created by a water screen nor a safe haven are acceptable as means of evacuation when the identified danger is fire or explosion.

5. For several reasons EBU is deeply concerned at this situation.

(a) As a carrier, the inland navigation industry finds itself required to meet an obligation that hinges on knowing whether others in the transport chain are fulfilling their own obligations, i.e., to provide two means of evacuation. The carrier has not the slightest influence in that regard yet is required to meet an obligation;

(b) The elimination of the safe haven and the safe area behind a water screen for cargoes of Class 2 and 3 substances and Classes 4.1, 4.2 and 4.3, amounts to a rejection of possible solutions to the problem of a second means of evacuation that, in the view of the inland navigation industry, would have provided adequate protection in many accident scenarios;

(c) Too little thought has thus far been given to what a second means of evacuation to be provided by the carrier might look like. Escape boats are used in maritime navigation, but are not built for inland navigation and cannot be used on canals because they are too big. There is no concept of evacuation boats for use in inland navigation. Safe havens on land are only accessible by a ship-to-shore connection of a kind that does not exist. Safe havens in the form of floating modules would first need to be developed;

(d) Inland tanker navigation is currently going through a very difficult period economically as a result of the transition from single-hull to double-hull vessels. Single-hull vessels cannot be used for carriage of petrol (or similar) beyond 31 December 2015 or for diesel fuel and heating oil (or similar) beyond 31 December 2018. It does not seem appropriate to compel vessels that are going to be taken out of service to now meet obligations to provide means of evacuation.

Proposal 1

6. There are as many different kinds of landside trans-shipment facilities as there are means of evacuation under 7.1.4.77 and 7.2.4.77. If under 1.4.2.2.1 (d) the carrier has sole responsibility for providing a second means of evacuation, that is asking too much. The vessel can hardly estimate the availability of evacuation boats, for example. Thus any landside facility that is not equipped with the required second means of evacuation must be involved in planning a second means of evacuation.

7. For these reasons EBU proposes that the text adopted at the twentieth session of the Safety Committee should be supplemented as follows:

“1.4.2.2.1 (d)

“[The carrier should], in consultation with the administrator of the landside installation, ascertain that a second means of evacuation in the event of an emergency from the vessel side is available, when the landside installation is not equipped with a second necessary means of evacuation.”

Proposal 2

8. The definitions of “safe area” and “safe haven” were supplemented by the following sentence by decision of the Safety Committee at its twenty-third session:

“[A safe area (or safe haven on board)] is not acceptable when the identified danger is fire or explosion.”

9. EBU requests that this sentence be deleted in its entirety.

Justification

10. In many accident scenarios a “safe area” and a “safe haven” may provide adequate protection. It is nevertheless important to design them to meet a clearly defined protection objective. EBU considers that its proposal, along with the exchange of views conducted thus far and the discussions to come, will meet that objective.

Proposal 3

11. EBU requests that, in addition to the existing means of evacuation, for cargoes of Classes 2 and 3, as well as Classes 4.1, 4.2 and 4.3, a safe area created by a water spray system of an appropriate capacity (10 l/m² per minute) should also be considered as an option for protection against all foreseeable risks.

Justification

12. In the design of fire protection systems on board ship and on land, the hosing of objects to be protected is a major component. In the event of accident, keeping the deck superstructure cold on tank vessels keeps the surface temperature down and helps prevent the fire spreading. Remaining in such protected areas helps protect people against explosion.

13. Unlike a vertical water screen, a spray system would also protect against any burning liquids around the boat.

14. The EBU proposals are set out in the annex. This option would give the inland navigation industry the chance to adapt flexibly and in its own way to various demands in several areas of navigation (canals and channelled sectors/free-flowing Rhine).

15. With a capacity of 10 l/m² per minute, the spray system is on the same scale as the equipment used for heat protection in firefighting vessels and as that used in protecting landside installations.

Proposal 4

16. EBU requests that, in addition to the existing means of evacuation, for cargoes of Classes 2 and 3, as well as Classes 4.1, 4.2 and 4.3, a safe haven on board should also be permitted as an additional option for protection against all foreseeable risks.

Justification

17. Using appropriate construction and insulation materials it is possible to create areas on board that protect from heat and explosion. By definition safe havens on board should be approved by the classification society.

Proposal 5

18. EBU requests transitional provisions until 31 December 2018 in order to prepare for the eventuality that the inland navigation industry, as carrier, might have to provide a second means of evacuation.

Justification

19. Those involved must have the opportunity to prepare any technical adaptations that may be required on board or in landside installations.

Annex

Proposals for amendment to decisions relating to means of evacuation

1. EBU proposes that the definitions of “safe area”, “water screen” and “safe haven” should be revised as follows:

(a) The definition of “safe area” is amended as follows:

“*Safe area* means a designated, recognizable area outside the cargo area which can be readily accessed by all persons on board. The safe area provides protection against the identified hazards of the cargo by a ~~water screen~~ water spray system for at least 60 minutes. The safe area can be evacuated during an incident. ~~A safe area is not acceptable when the identified danger is fire or explosion.~~”

(b) The idea of a vertical water screen is dropped. The water screen is replaced by a spray system defined as follows:

“*Water spray system* means an on-board installation that, by means of a uniform distribution of water, is capable of protecting all the vertical external surfaces of the ship’s hull fore and aft, all vertical surfaces of superstructures and deckhouses and deck surfaces above the superstructures, engine rooms and spaces in which combustible materials may be stored. The capacity of the water spray system for the area to be protected should be 10 l/m² per minute. The spray system should be operable from the wheelhouse and the safe haven.

A spray system on land of at least the same capacity may replace the on-board spray system.”

(c) The definition of “safe haven” is amended as follows:

“*Safe haven* means a designated, recognizable, readily accessible module (fixed or floating) capable of protecting all persons on board against the identified hazards of the cargo for at least sixty minutes during which communication to the emergency and rescue services is possible. A safe haven can be integrated into the wheelhouse or into the accommodation. A safe haven can be evacuated during an incident. ~~A safe haven on board is not acceptable when the identified danger is fire or explosion.~~ A safe haven on board and a floating safe haven outside the ship are certified by a recognized classification society. A safe haven on land is constructed according to local law.”

2. EBU justifies these proposals as follows:

(a) “Safe area”:

EBU is aware that the water screen as originally envisaged was considered inadequate protection against burning liquids on the surface of the water. To guard against this danger, all the superstructures and the deck in the protection area should in case of need be sprayed with water. A blanket of water of this kind will protect the entire fore or aft of the vessel against fire and heat. Inside the superstructures, protection against explosion is sufficient.

(b) “Water screen”:

On firefighting vessels equipment of the same kind is installed for protection of the vessel itself. Whatever is deemed sensible for firefighting vessels should also be sufficient to protect inland navigation vessels. The texts proposed here are based on the rules on fire protection and fire extinguisher equipment required to obtain the additional notation FF1/2 or FF1/3 from an approved classification society (FF = Fire Fighter).

(c) “Safe haven”:

An area constructed on board the vessel with appropriate materials (steel, insulating material), that provides adequate protection against all foreseeable risks associated with the cargo.

3. If these proposals are accepted the Safety Committee is requested to make all the consequential amendments (e.g., 7.1.4.77 and 7.2.4.77).
