
Economic Commission for Europe**Inland Transport Committee****15 January 2013****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-second session**

Geneva, 22–25 January 2013

Item 5 b) of the provisional agenda

Reports of informal working groups

PROPOSALS FOR AMENDMENTS TO THE REGULATIONS ANNEXED TO ADN:**Amendments for entry into force on 1 January 2015****Report on the second meeting of the informal working group “Explosion protection on tank vessels” on 13 December in Braunschweig****Transmitted by the Central Commission for the Navigation of the Rhine (CCNR)¹****Introduction**

1. The second meeting of the informal working group “Explosion protection on tank vessels” was held on 13 December at Physikalisch-Technische Bundesanstalt, Braunschweig. The following persons attended the meeting:

Frau Dr. E. Brandes (Deutschland, Vorsitz)
Frau Y. Adebahr-Lindner (Deutschland)
Herr T. Dosdahl (GL)
Herr D. Gerstenkorn (Dettmer Reederei)
Herr F. Krischok (Deutschland)
Herr van Westerhuis (EUROPIA)
Herr Vermeulen (EUROPIA)

Results

2. In accordance with the mandate of the Safety Committee (ECE/TRANS/WP.15/AC.2/44 point 9), the Group discussed the following subject:

¹ Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR/ZKR/ADN/WP.15/AC.2/22/INF.23.

2.1 Clarification of the shape of the zones:

This was based on the discussions at the 21. Meeting of the Safety Committee and the result is given in the modified drawing and description of the zoning (Annex 1). The modifications are marked in the description.

2.2 Consideration of the regulations valid for shore facilities:

Within the EU amongst others the EU directive 1999/92 (ATEX) is valid. That means that potentially explosive areas have to be denoted and classified into zones based on their probability, if due to the result of a hazard assessment potentially explosive atmospheres cannot be excluded. These requirements are however not a rigid conception. They have to be adapted on the local circumstances. This means, the dimensions of the zones vary from shore facilities to shore facilities, from harbour to harbour and therefore no direct feedback with the zoning on tank vessels for which explosion protection is necessary is possible.

It was pointed out again that the shore facilities may set additional requirements and demands on the tank vessel concerning the use of non-explosionproof electrical and nonelectrical equipment during loading and unloading.

The working group however sees no possibility to implement this fact into the ADN, because facilities are not under the scope of ADN.

The working group asks to discuss if the fact – The facilities may set additional requirements and demands on the tank vessel during loading and unloading- could be part of the ISGINTT.

The positions of UTV (Unabhängiger Tanklagerverband)

- Shore facilities are not covered by ADN
- Zoning and the dimensions of the zones of the shore facilities are not standardized but adapted on the local situation
- If necessary shore facilities will set additional requirements during loading and unloading introduced by a participant on behalf of FETSA have been part of the discussion. Requirements and circumstances of NON-EU countries could not be discussed by the participants of the second meeting because there was not sufficient information.

2.3 Generation of a list which summerizes the paragraphs of the ADN to be changed if the new explosion protection concept will become part.

Annex 2 contains a list of the basic parts to be changed. It is however at the moment not exhaustive with respect to the consequences.

3. The Safety Committee is asked to examine these proposals.

Annex 1

Zoning

Zone 0: comprises:



- Inside all cargo tanks, tank-containers or portable tanks, pipings containing cargoes or cargo vapours including their equipment as well as pumps and compressors.

Zone 1: comprises:



- Inside all compartments within the part of the cargo area below deck being not part of zone 0.
- Compartments on deck within the cargo area.
- The deck from one side of the vessel to the other within the cargo area up to the borders indicated in the drawing.
- Whereas every opening in zone 0 except HJ valve ~~and shore connections/vessel pumps (manifold)~~ has to be surrounded cylindrically by at least 2.5 m zone 1 ~~up to a height of 2.5 m above the opening.~~

The height has to be 2.5 m above the deck of the cargo tank around and between the openings in zone 0 however at least 1.5 m above highest pipings containing cargoes or cargo vapours.

- An area surrounding cylindrically the HJ/safety valve with a radius of 3.0 m up to a height of 4.0 m above the opening of the HJ/safety valve.
- A spherical segment surrounding the ventilation openings of the service spaces located within the cargo area which are actively ventilated, comprising a radius of 1.0 m centred over the opening.

Zone 2: comprises:

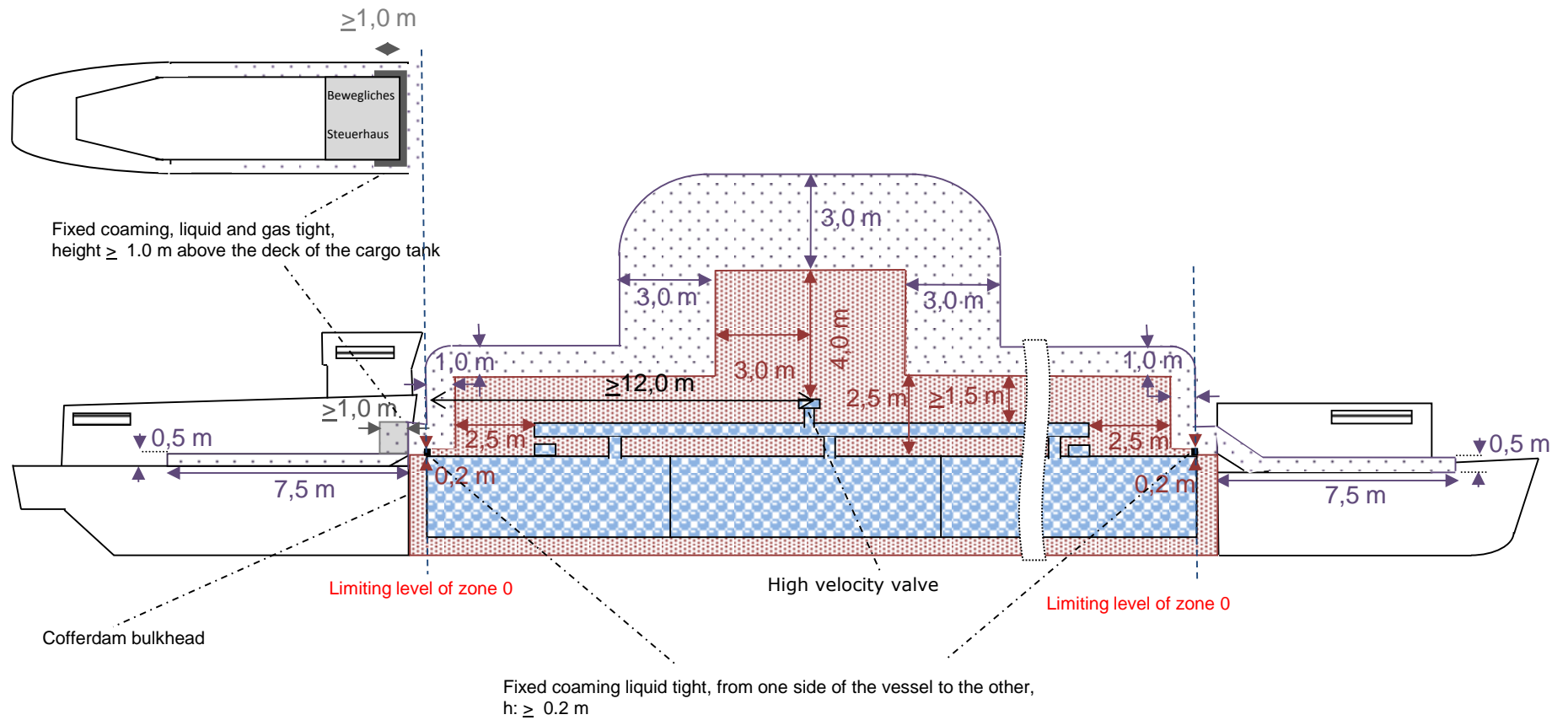


- An area on deck of 1.0 m in height and length following zone 1 (see drawing).
- On the afterdeck an area of the entire width of the vessel adjacent to the end of the cargo area, with a complete length of 7.5 m. The area from the side of the vessel to the lowering of the wheelhouse limiting coaming this area equals the length and height of the dimensions of the lateral side. The height of this coaming has to be at least 1.0 m above the deck of the cargo tank. Apart from that, the height is 0.5 m.
- On the foredeck an area of the entire width of the vessel, adjacent to the end of the cargo area with a length of 7.5 m. The height of this area is accompanying the hatchways 1.0 m and otherwise 0.5 m.
- An area following zone 1 around the HJ/safety valves having an expansion of 3.0 m.
- A spherical segment following zone 1 which surrounds the ventilation openings of the service spaces located within the cargo area which are actively ventilated, comprising a radius of 1.0 m centred over the opening.

The interior of closed compartments extending into zone 2 and being constructed in such a way that the penetration of gases from zone 2 is avoided, will not be part of the explosion-hazardous area.

The zones extend to a maximum from one side of the vessel to the other.

Schematic view of the proposed zoning



Annex 2

List of the part and chapters of ADN to be changed (non exhaustive)

1.2 1 Definitions

Amendments and modifications will be necessary as well as a drawing of the zoning.

1.6 Transitional measures

7. Requirements concerning loading, carriage, unloading and handling of cargo

7.2 Tank vessels

A clear differentiation between tank vessels for which explosion protection is necessary and such for which it is not would be reasonable.

Additional chapters dealing with non-electrical equipment probably necessary

8.1.2

Additional chapters dealing with non-electrical equipment probably necessary

8.1.6

8.2.2 New questions / adoption of existing questions

9.3.1

Additional chapters dealing with non-electrical equipment probably necessary

9.3.2

A clear differentiation between tank vessels for which explosion protection is necessary and such for which it is not would be reasonable.

Additional chapters dealing with non-electrical equipment probably necessary

9.3.3

A clear differentiation between tank vessels for which explosion protection is necessary and such for which it is not would be reasonable.

Additional chapters dealing with non-electrical equipment probably necessary
