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**Economic Commission for Europe****Inland Transport Committee****8 January 2014****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 6 of the provisional agenda

**Proposals for amendments to the ADN:****Reports of informal working groups**

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**Report on the 4th meeting of the informal working group on ‘Explosion protection on tank vessels’ (6-7 November 2013, Strasbourg)****Transmitted by the Central Commission for the Navigation of the Rhine (CCNR) <sup>1</sup>****Introduction**

The fourth meeting of the informal working group on ‘Explosion protection on tank vessels’ was held on 6 and 7 November at the Central Commission for the Navigation of the Rhine in Strasbourg. The following delegates attended the meeting:

Y. Adebahr-Lindner, BAM, H.-J. Braun, CIPA, B. Bürgi, BAV, J.-P. de Maat, MIM, K. den Braven, BLN T. Dosdahl, GL, H. Klopp, GL, F. Krischok, BAM, M. Lyons, Schweizerische Rheinhäfen, M. van Westerhuis, Europa, R. Vermeulen. Europa, K. Vinke, LR, E. Brandes, PTB.

**I. Results**

In accordance with the mandate of the Safety Committee (ECE/TRANS/WP.15/AC.2/46, VII B), the Group discussed the following subjects:

**I. INF.4 Request for interpretation: Reefers** Transmitted by the Governments of the Netherlands and Germany (WP15-AC2-23-INF.4)

The informal working group was asked by the Safety Committee to answer the questions raised in INF 4. The answers are summarized in Annex 1.

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<sup>1</sup> Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/24/INF.17

## **II. Proposal for amendments to the ADN necessary for the implementation of the modified explosion protection concept**

The working group went on preparing the necessary amendments to the ADN. The group worked on chapter 1.2 'Definitions and units of measurement' and 9.3.2 'Rules for construction of type C tank vessels'.

The work is not yet finished. The group is meeting again in March 2014 to continue its work.

The current status of chapter 1.2 and chapter 9.3.2 may be provided on request.

In conjunction with the work on chapter 9 there was an intensive discussion again concerning the question of whether it is possible from a legal point of view to include provisions in the ADN which aim to protect against potential dangers from (e.g. toxic gases, explosive gas/air mixtures) outside the vessel?

Some experts were of the opinion that the current mandate from the Safety Committee to the informal working group on Explosion Protection on Tank Vessels also included taking into account potential dangers from external operational interfaces such as the shore side. Non product specific explosion protection measures in the current ADN may cover protection against dangers (e.g. toxic gases, explosive gas/air mixtures) from outside the vessel, even if the product which is loaded or unloaded needs no explosion protection.

Others were of the opinion that the current mandate did not include taking into account the potential dangers from outside the vessel and therefore the safety measures with respect to explosion protection can only be linked to the vessel in relation to its ship's list. This point of view is based on the consideration all vessels are affected by the potential dangers from outside the vessel, even if they do not transport dangerous goods.

The informal working group asks the Safety Committee for support in answering the above question.

## Annex 1 to the report on the 4th meeting of the informal working group “Explosion protection on tank vessels” (6 and 7 November 2013, Strasbourg)

### Answers from the informal working group “Explosion protection on tank vessels” to questions raised in WP15-AC2-23-INF.4

The intention of the paper WP15-AC2-23-INF.4 was explained again by a representative of the delegations that prepared the paper for the 23rd meeting of the Safety Committee.

The answers to the questions raised will enable the Safety Committee to decide whether there is action needed with respect to the joint shipping of non-explosion protected reefers and containers containing flammable gases or with liquids having a flashpoint of less than 23°C.

The informal working group answers the questions (WP15-AC2-23-INF4 III: Request for clarification) as follows:

	Question	Answer and justification
(a)	Reefers and their integral refrigeration units are not “electrical equipment/installations/apparatus” according to 9.1.0.52.1 and 7.1.3.51 ADN? Do these paragraphs talk only about equipment/installations/apparatus permanently fitted to the vessel?	The hold of dry cargo vessels is classified as zone 1 and the space above deck is classified as zone 2 when substances for which explosion protection is required are carried (see ADN 1.2.1 Definitions: Protected area). From the safety point of view as a consequence the equipment used should fulfil the respective requirements.
(b)	As the ADN itself has no provisions for the stowage of containers with special regard to reefers and potential sources of ignition, can the provisions of the IMDG Code be adapted?	No. The hold is zone 1, the space above deck is zone 2 when substances for which explosion protection is required are carried. The hold is not ventilated contrary to seagoing ships.
(c)	Is it allowed to carry reefers ( <u>not of a certified safe type</u> ) <u>below deck</u> when <u>containers</u> containing flammable gases or liquids having a flashpoint of less than 23°C are stowed <u>below deck</u> ?	No. The vapours of liquids having a flash-point of less than 23°C are heavier than air and will therefore flow and accumulate below deck
(d)	Is it allowed to carry reefers ( <u>not of a certified safe type</u> ) <u>on deck</u> with only a minimum distance of 2.4 meters to containers containing flammable gases or liquids having a flashpoint of less than 23°C?	No. The distance is too short because there is low or no ventilation.
(e)	Is it allowed to carry reefers ( <u>not of a certified safe type</u> ) <u>on deck</u> when containers <u>are stored below deck</u> containing flammable gases or liquids having a flashpoint of less than 23°C or other dangerous goods?	Yes for containers carrying liquids having a flashpoint of less than 23°C. No for containers carrying class 2 products. Class 2 products may be lighter than air.

1. As a consequence of the answers given to the questions raised, the informal working states that the ADN is not sufficiently clear with respect to the joint shipping of non explosion protected reefers and containers containing flammable gases or with liquids having a flashpoint of less than 23 °C products and recommends a clarification.