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Economic Commission for Europe

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-eighth session

Geneva, 25–29 January 2016

Item 6 of the provisional agenda

Reports of informal working groups

Report of the tenth Meeting of the Informal Working Group on Explosion Protection on Tank Vessels

**Transmitted by the Central Commission for the Navigation of the
Rhine¹**

Corrigendum

¹ Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR-ZKR/ADN/WP.15/AC.2/2016/21/Corr.1.

Page 7:

<i>Classification of explosion hazardous areas</i>	Replace first line by <u>Classification of zones explosion hazardous areas</u> (see Directive 1999/92/CE ²)	
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Page 11: Insert after "Flammable gas detector "

<i>Gas detection system Détection de gaz Gasspüranlage: газодетекторная система</i>	<i>Gas detection system</i> means a fixed <u>monitoring</u> system capable of detecting in time significant concentrations of flammable gases given off by the cargoes at concentrations below the lower explosion limit <u>LEL</u> and capable of activating the alarms <u>when a limiting value is exceeded</u> . It has to be calibrated at least according to n-Hexane. The detection level of the sensors is 10% of the LEL of n-Hexane as a <u>maximum</u> . It has to be certified according to IEC/EN ³ 60079-29-1 (and EN50271). If it is used in <u>explosion hazardous areas</u> it has to be suitable to be used in the respective zone and it has to be <u>proven that the applicable requirements are fulfilled</u> (e.g. conformity assessment procedure according to Directive 2014/34/EC ⁴ or IECEx-System ⁵ or ECE Trade 391 ⁶ or at least equivalent).	Basic safety concept Agreed upon with IWG "Gasfee "
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Page 13:

<i>Oxygen measuring system</i>	Replace last sentence by <u>This device shall be tested according to the European standard IEC/EN⁷) 50104:2011. If it is used in explosion hazardous areas it has to be proven that the applicable requirements are fulfilled (e.g. conformity assessment procedure according to Directive 2014/34/EC⁸, or ECE Trade 391⁹ or at least equivalent).</u>	
<i>Protective coaming, liquid tight</i>	Change text to: <u>Protective coaming, liquid tight</u> means a liquid tight coaming on deck at the height of the outer cargo tank bulkhead (see drawing zoning) but maximum at a distance of 0.6 m to the outer cofferdam bulkhead or hold end bulkheads which prevents liquid from entering the fore and aft parts of the vessel. The connection between the protective coamings and the spill coaming has to be liquid tight.	
<i>Protection wall, gas and liquid tight</i>	Change text to: <u>Protection wall, gas and liquid tight</u> means a gas and liquid tight wall on deck at the height of the boundary plane of the cargo area	

² Official Journal of the European Communities No. L 23 of 28 January 2000, S. 57

³ IEC/EN means: This standard is available as an IEC standard and as an European standard

⁴ Journal of the European Communities No. L 23 of 26. February 2014, S. 309

⁵ <http://iecex.com/rules>

⁶ A Common Regulatory Framework for Equipment Used in Environments with an Explosive Atmosphere, United Nations 2011

⁷ Die Buchstaben IEC/EN bedeuten: Die Norm ist sowohl als IEC-Norm und als EN-Norm verfügbar

⁸ Journal of the European Communities No. L 23 of 26 February 2014, S. 309.

⁹ A Common Regulatory Framework for Equipment Used in Environments with an Explosive Atmosphere, United Nations, 2011.

Page 14:

<i>Sampling opening</i>	Replace the last sentence by: <u>The-flame arrester plate stack shall be tested according to the European standard EN ISO 16852:2010 and it has to be proven that the applicable requirements are fulfilled (e.g. conformity assessment procedure according to Directive 2014/34/EC¹⁰, or ECE Trade 391¹¹ or at least equivalent).</u>	
<i>Receptacle for slops</i>	Insert as last sentence: <u>They shall be marked and easy to handle.</u>	

Page 16:

<i>Vacuum valve</i>	Replace first line by <u>Vacuum valve means a spring loaded device which is activated automatically by pressure the purpose of</u>	
<i>Zoning Classification des zones Zoneneinteilung Классификация зон</i>	Replace paragraph after indents by <u>Up to a distance of at least 1.6 m to the “boundary plane of the cargo area” the height above deck is 2.5 m, however at least 1.5 m above the highest piping carrying cargoes or cargo vapours. Adjacent (fore and aft) till the outermost cargo tank shots, the height is 0,25 m above deck. If there is a pump room installed inside the cofferdam the adjacent height (fore and aft) is 1.0 m above deck (see drawing).</u>	

Page 17:

1.4.2.2 (f)	Insert at the beginning <i>(Reserved)</i>	
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Page 19:

9.1.0.52.1	Replace 2018 by 2034
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Page 21:

7.2.3.51.4	Replace 20164 by 2016
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Page 22:

8.6.1.3, 8.6.1.4	Replace 20134 by 2034
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Page 29:

7.1.3.51.4 new	Delete: resp. cooled accordingly	
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¹⁰ Journal of the European Communities No. L 23 of 26 February 2014, S. 309.

¹¹ A Common Regulatory Framework for Equipment Used in Environments with an Explosive Atmosphere, United Nations, 2011.

Page 36:

7.2.4.22.6	Replace by: The duration of opening shall be limited to the time necessary for control, cleaning, replacing the flame arrester stake plate, gauging or sampling	
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Page 37: last line before 8 Provisions for vessel crews, equipment, operation and documentation

Insert : 7.2.4.74		
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Page 39:

8.1.5.2	Insert at the beginning: (Reserved)	
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Page 40 line concerning "Competent authority":

Insert : <u>8.6.1.1 and</u> <u>8.6.1.2</u>	Competent authority	
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Page 45:

<u>9.1.0.53.1 new</u>	Replace twice "of a certified safe type corresponding " by of a certified safe type corresponding at least valid to be used in zone 1	
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Page 47:

9.3.1.8.4 new, 9.3.2.8.4 new, 9.3.3.8.4 new Delete 9.3.3.8.4 new		
Insert after 9.3.1.8.4 new, 9.3.2.8.4 new 9.3.3.8.4	The compliance of the documents referred to in 8.1.3.2 with the reality on board shall be checked by a recognised classification society whenever the certificate of approval has to be renewed and during the third year of validity of the certificate of approval. A certificate signed by the recognised classification society shall be kept on board. 9.3.3.8.2 and 9.3.3.8.3, checking of the condition of the gas detection system, do not apply to open type N.	
9.3.1.10.2, 9.3.2.10.2, 9.3.3.10.2	Insert before the last sentence: The protective coaming has either to extend from one side of the vessel to the other or to be fixed between the longitudinal spill coamings.	

	<p><i>Scip the following text to the end of the paragraph:</i> (f) When the list of substances on the vessel according to 1.16.1.2.5 will contain substances for which <u>explosion protection is required in column (17) of Table C of 3.2.3.2 and the recess is deeper than 0.5 m, it shall be provided with a permanent gas detection system which automatically indicates the presence of explosive gases by means of direct-measuring sensors and actuates a visual and audible alarm when the gas concentration has reached 20% of the lower explosion limit LEL of the cargo. The sensors of this system shall be placed at suitable positions at the bottom of the recess. Measurement shall be continuous.</u> <u>Visual and audible alarms shall be installed in the wheelhouse and on deck and, when the alarm is actuated, the vessel loading and unloading system shall be shut down.</u> <u>Failure of the gas detection system shall be immediately signaled in the wheelhouse and on deck by means of visual and audible alarms.</u></p>	
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<p>9.3.1.12.6 9.3.2.12.6 9.3.3.12.6</p>	<p><i>Replace by:</i> Notice boards shall be fitted at the ventilation inlets indicating the conditions under which they shall be closed. Any ventilation inlets of accommodation, <u>wheelhouse</u> and service spaces <u>outside the cargo area</u> leading outside shall be fitted with <u>fixed devices according to 9.3.x.40.2.2 c. which can be closed rapidly. It shall be clear whether they are open or closed.</u> Such ventilation inlets shall be located not less than 2.00 m from the cargo area. Ventilation inlets of service spaces in the cargo area below deck may be located within such area</p>	
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<p>9.3.3.22.4</p>	<p><i>Insert before "for the closed N type "</i> <u>The opening pressure of the pressure relief device and the opening pressure of the vacuum valve shall be permanently marked on the valves.</u></p>	
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	<p><i>Cross out completely (d)</i></p>	
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<p>9.3.3.26.2</p>	<p><i>Insert at the beginning</i> Receptacles for slops shall be fire resistant and shall be capable of being closed with lids (drums with removable heads, code 1A2, ADR). The receptacles for slops shall be marked and easy to handle.</p>	
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Page 63: Insert after 9.3.3.28

9.3.1.31.4, 9.3.2.31.4, 9.3.3.31.4	The surface temperature of the outer parts of engines used during loading or unloading operations, as well as that of their air inlets and exhaust ducts shall not exceed the allowable temperature according to the temperature class of the substances carried. This provision does not apply to engines installed in service spaces provided the provisions of 9.3.1.52.3 are fully complied with.	superfluous
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Page 66:

9.3.1.53, 9.3.2.53 9.3.3.53	<i>Replace the first line by</i> Text in 9.3.x.53, 9.3.x.53.1, 9.3.x.53.3, 9.2.x.53.3 to be replaced by	
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Page 67:

9.3.2.5 <u>5</u>- 9.3.2.5 <u>6</u> <i>Replace by</i> 9.3.2.5 <u>5</u>-9.3.2.5 <u>9</u>		
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