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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)*

(Tenth session, Geneva, 23-27 January 2006
agenda item 4)

**PROPOSALS FOR AMENDMENTS TO THE REGULATIONS
ANNEXED TO ADN****

**Transmitted by the Central Commission for the
Navigation of the Rhine (CCNR)**

The secretariat reproduces below proposals for amendments to the Regulations annexed to ADN transmitted by the Central Commission for the Navigation of the Rhine (CCNR).

* *This meeting is organized jointly by the Economic Commission for Europe and the Central Commission for the Navigation of the Rhine.*

** *Distributed in German by the Central Commission for the Navigation of the Rhine under the symbol CCNR/ZKR/ADN/WP.15/AC.2/2006/4.*

Draft amendments to ADN

ADN	AMENDMENTS TO BE MADE	REASON
1.1.3.6	<p><i>Draft 1.1.3.6 to read:</i></p> <p>“1.1.3.6 Exemptions related to quantities carried on board vessels.</p> <p>1.1.3.6.1 (a) In the event of the carriage of dangerous goods in packages, the provisions of ADN other than those of 1.1.3.6.2 are not applicable when the gross mass of all the dangerous goods carried does not exceed 3,000 kg.</p> <p>This provision does not apply to the carriage of:</p> <p>(i) to (vii) (unchanged)</p> <p>(b) In the event of the carriage of dangerous goods in packages other than tanks (tank-containers, tank road vehicles, etc.), the provisions of ADN other than those of 1.1.3.6.2 are not applicable to the carriage of:</p> <ul style="list-style-type: none"> - substances of Class 2 of group F in accordance with 2.2.2.1.3 or aerosols of group F according to 2.2.2.1.6; or - substances assigned to Packing Group I, except substances of Class 6.1 <p>when the gross mass of these goods does not exceed 300 kg.</p> <p>1.1.3.6.2 The carriage of exempted quantities according to 1.1.3.6.1 is, however, subject to the following conditions:</p> <p>(a) The obligation to report in accordance with 1.8.5 remains applicable;</p> <p>(b) Packages shall comply with the requirements for packagings referred to in Parts 4 and 6; the provisions of 5.2 concerning marking and labelling are applicable;</p> <p>(c) The following documents shall be on board:</p> <ul style="list-style-type: none"> - the transport documents (see 5.4.1.1); the transport documents shall concern all the dangerous goods carried on board; - the stowage plan (see 7.1.4.11.1); 	<i>Clarification</i>

	<p>(d) The goods shall be stowed in the holds.</p> <p>This provision does not apply to goods loaded in:</p> <ul style="list-style-type: none"> - containers with complete spray-proof walls; - road vehicles and wagons with complete spray-proof walls; <p>(e) Goods of different class shall be separated by a minimum horizontal distance of 3 m. They shall not be stowed on top of each other.</p> <p>This provision does not apply to:</p> <ul style="list-style-type: none"> - containers with complete metal walls; - road vehicles or wagons with complete metal walls; <p>(f) For seagoing and inland navigation vessels, where the latter carry only containers, the above requirements shall be considered to have been met if the provisions of the IMDG Code regarding stowage and separation are met and if this particular is recorded in the transport document;</p> <p>(g) Chapter 1.10 is applicable.”</p>	
<p>1.2.1</p>	<p>Definitions</p> <p>“<i>Bulk container</i>”:</p> <p><i>Concerns the German version only</i></p> <p><i>Add the following definition:</i></p> <p>“<i>Vacuum construction pressure</i> means the vacuum pressure on the basis of which the cargo tank or the residual cargo tank has been designed and built;”</p> <p>“<i>Sampling opening</i>”: <i>Add the following sentence:</i></p> <p>“The flame arrester screen shall be of a type approved by the competent authority for this purpose;”</p> <p>“<i>Construction pressure</i>”: delete the second sentence</p> <p>“<i>Filling ratio (cargo tank)</i>”, read as follows:</p> <p>“Where a filling ratio is given for a cargo tank, it refers to the percentage of the volume of the cargo tank which may be filled with liquid during loading;”</p>	<p><i>No definition existed for vacuum construction pressure</i></p> <p><i>Clarification</i></p> <p><i>Clarification</i></p>

1.6.7.2.1 *Table 2: insert:***Table of general transitional provisions**

Paragraphs	Subject	Time limit and additional provisions	REASON
9.3.2.14.2	Stability (intact)	N.R.M.	<i>Consequence of the amendment to 9.3.2.14.2</i>
9.3.1.21.5 (b) 9.3.2.21.5 (b) 9.3.3.21.5 (c)	Installation of on-board pump switch-off from the shore	Renewal of the certificate of approval after 1 January 2007	<i>Consequence of the amendments to 9.3.x.21.5</i>
9.3.3.11.7	Hold spaces	N.R.M. after 1 January 2007 The following requirements are applicable to vessels with a certificate of approval valid prior to 1 January 2007: Where a vessel is constructed with hold spaces containing cargo tanks which are independent of the structure of the vessel, the space between the wall of the hold space and the wall of the cargo tanks shall be not less than 0.60 m. The space between the bottom of the hold space and the bottom of the cargo tanks shall be not less than 0.50 m. The space may be reduced to 0.40 m under the pump sumps. The space between the suction well and the bottom structures shall be not less than 0.10 m. If the above-mentioned spaces are not feasible, it shall be possible to remove the cargo tanks easily for inspections.	<i>Consequence of the creation of Type N with double hull</i>
9.3.3.13.3 paragraph 2	Stability (general)	N.R.M. after 1 January 2007	
9.3.3.14.2 (b) and (c)	Stability (intact)	N.R.M. after 1 January 2007	
9.3.3.15	Stability (damaged condition)	N.R.M. after 1 January 2007	

2.1.3.10	<i>Concerns the German version only</i>		
3.2.1	TABLE A:		
	1077	<i>Concerns the German version only</i>	
	2057	<i>First entry, column (8), insert: "T"</i>	<i>Consequence of the acceptance of this substance for carriage in tank vessels</i>
	2078	<i>Column (2), concerns the German version only Column (8), delete: "T"</i>	<i>Improvement</i>
	2078	<i>New entry like 2078 above, but: Column (2): "TOLUENE DIISOCYANATE (2,4-TOLUENE DIISOCYANATE)" Column (8), insert: "T"</i>	<i>Improvement</i>
	2302	<i>Column (8), insert: "T"</i>	<i>Consequence of the acceptance of this substance for carriage in tank vessels</i>
	2904	<i>Column (8), insert: "T" Column (20), insert: "* applies only to phenolates but not to chlorophenolates"</i>	<i>Consequence of the acceptance of this substance for carriage in tank vessels</i>
	3175	<i>New entry like 3175 above, but: Column (2): "SOLIDS CONTAINING FLAMMABLE LIQUID, MOLTEN, having a flash-point up to 61°C (DIALKYL-(C₁₂-C₁₈)-DIMETHYL-AMMONIUM and 2-PROPANOL)". Column (8), insert: "T"</i>	<i>Improvement</i>

3.2.3	<i>In the explanatory note for column (5), insert “generally” before “included”</i>	<i>Clarification</i>
	TABLE C:	
	<i>1030 Concerns the German version only</i>	
	<i>1038 Column (12), delete: “0.57”</i>	<i>Not accurate and unnecessary</i>
	<i>1063 Concerns the German version only</i>	
	<i>1077 Concerns the German version only</i>	
	<i>1170 Delete the first position</i>	<i>Alignment with Table A</i>
	<i>1170 2nd position, column (2), read: “ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), aqueous solution with more than 70% alcohol by volume”</i>	<i>Alignment with Table A</i>
	<i>1170 3rd position, column (2), read: “ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION) aqueous solution with more than 24% and not more than 70% alcohol by volume”</i>	<i>Alignment on Table A</i>
	<i>1224 Second-last entry, concerns the German version only</i>	
	<i>1300 Column (2), delete: “white spirit”</i>	<i>Improvement</i>
	<i>1999 Column (2), read: “TARS, LIQUID, including road asphalt and oils, bitumen and cut backs”</i>	<i>Alignment with Table A</i>
	<i>2078 Column (2), concerns the French text only</i>	<i>Improvement</i>
	<i>3295 Column (2), replace: “(… with more than 10% benzene)” by “WITH more than 10% BENZENE” (applies to all entries containing this phrase in brackets)</i>	<i>Improvement</i>
	<i>9003 Concerns the German version only</i>	

UN No. or substance identification No.	Name and description	Class	Classification code	Packing group	Labels	Type of tank vessel	Cargo tank design	Cargo tank type	Cargo tank equipment	Opening pressure of the high-velocity vent valve in kPa	Maximum degree of filling in %	Relative density at 20° C	Type of sampling device	Pump room below deck permitted	Temperature class	Explosion group	Anti-explosion protection required	Equipment required	Number of cones/blue lights	Additional requirements/remarks	Reason
(1)	(2)	3 (a)	3 (b)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
2057	TRIPROPYLENE (propyltrimer)	3	F1	II	3	N	2	2		10	97	0.744	3	yes	T3	II B ⁴⁾	yes	PP, EX, A	1		Substances newly accepted for carriage in tank vessels (special authorizations)
2302	5-METHYLHEXAN-2-ONE	3	F1	III	3	N	3	2			97	0.81	3	yes	T1	II A	yes	PP, EX, A	0		
2904	CHLOROPHENOLATES, LIQUID	8	C9	III	8	N	4	2			97	1.130-1.180	3	yes				PP, EP	0	34	
3256	ELEVATED TEMPERATURE LIQUID, N.O.S. with flash-point above 61° C, at or above its flash-point (Low QI Pitch)	3	F2	III	3	N	3	1	4		95	1.1-1.3	3	yes	T2	II B	yes	PP, EX, A	0	7	

5.2.2.2.2	Concerns the German version only	
7.1.4.8.2	<i>After “5.2” insert:</i> “, for which marking with three blue cones or three blue lights is prescribed in column (12) of Table A of Chapter 3.2,”	<i>Clarification</i>
7.2.4.51 1st paragraph	<i>Add the following sentence:</i> “All other electrical equipment marked in red shall be switched off.”	<i>Clarification</i>
7.2.5.0.1	<i>Add the following second sentence:</i> “When because of the cargo carried no marking with blue cones or blue lights is prescribed but the concentration of flammable gases in the cargo tanks is 10% higher than the lower explosion limit, the number of blue cones or blue lights to be carried is determined by the last cargo for which this marking was required.”	<i>Clarification</i>
8.1.2.3 (a)	<i>Replace:</i> “journal” with “plan”	<i>Mistake</i>
9.3.x.11.4 “9.3.x.11.4	<i>Read:</i> “The bulkheads bounding the cargo tanks, cofferdams and hold spaces shall be watertight. The cargo tanks and the bulkheads bounding the cargo area shall have no openings or penetrations below deck.”	<i>Acceptance of penetrations between the engine room and the double hull spaces. Increased possibilities for penetrations (e.g. for ballast installations)</i>
9.3.2.12.7 9.3.3.12.7	<i>Delete:</i> “9.3.2.21.11” and “9.3.3.21.11”, respectively	<i>Consequence of the deletion of 9.3.2.21.11 and 9.3.3.21.11</i>
9.3.x.17.5 (f)	<i>Read:</i> “(f) Pipes from the engine room may pass through the service space in the cargo area or a cofferdam or a hold space or a double-hull space to the outside provided that within the service space or cofferdam or hold space or double-hull space they are of the thick-walled type and have no flanges or openings.”	<i>Acceptance of penetrations between the engine room and the double-hull spaces. Increased possibilities for penetrations (e.g. for ballast installations)</i>

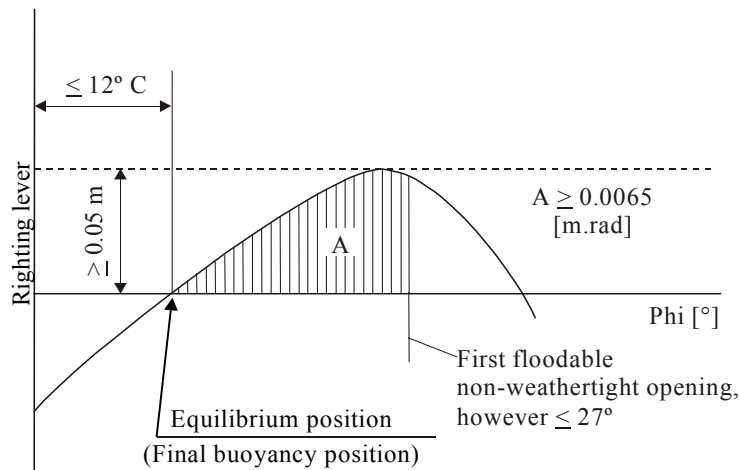
<p>9.3.x.21.5</p>	<p><i>The existing text becomes (a)</i></p> <p><i>Add a new (b) to 9.3.1.21.5 and to 9.3.2.21.5 and (d) to 9.3.3.21.5 to read:</i></p> <p>“(b) or (d) During discharging by means of the on-board pump, it shall be possible for the shore facility to switch it off. For the purpose, an independent fail-safe power line, fed by the vessel, shall be switched off by the shore facility by means of an electrical contact.</p> <p>It shall be possible for the binary signal of the shore facility to be transmitted via a watertight two-pin plug or a connector device in accordance with standard EN 60309-2:1999, for direct current of 40 to 50 volts, identification colour white, position of the nose 10 h.</p> <p>The plug shall be permanently fitted to the vessel close to the shore connections of the unloading pipes.”</p>	<p><i>Introduction of the possibility of the shore facility switching off discharging</i></p>
<p>9.3.2.14.2</p>	<p><i>Read:</i></p> <p>“For vessels with cargo tanks of more than 0.70 B in width, proof shall be furnished that the following stability requirements have been complied with:</p> <p>(a) In the positive area of the righting lever curve up to immersion of the first non-watertight opening there shall be a righting lever (GZ) of not less than 0.10 m;</p> <p>(b) The surface of the positive area of the righting lever curve up to immersion of the first non-watertight opening and in any event up to an angle of heel $\leq 27^\circ$ shall not be less than 0.024 m.rad;</p> <p>(c) The metacentric height (GM) shall be not less than 0.10 m.</p> <p>These conditions shall be met bearing in mind the influence of all free surfaces in tanks for all stages of loading and unloading.”</p>	<p><i>Changes to the intact stability rules since small vessels were unable to conform to ADN</i></p>

9.3.3.11.7	<p><i>Read:</i></p> <p>“For double-hull construction with the tanks integrated in the vessel’s structure or where hold spaces contain cargo tanks which are independent of the structure of the vessel, or where independent cargo tanks are used, or for double-hull construction where the cargo tanks are integrated in vessel’s structure, the space between the wall of the vessel and wall of the cargo tanks shall be not less than 0.60 m.</p> <p>The space between the bottom of the vessel and the bottom of the cargo tanks shall be not less than 0.50 m. The space may be reduced to 0.40 m under the pump sumps.</p> <p>The vertical space between the suction well of a cargo tank and the bottom structures shall be not less than 0.10 m.</p> <p>When a hull is constructed in the cargo area as a double hull with independent cargo tanks located in hold spaces, the above values are applicable to the double hull. If in this case the minimum values for inspections of independent tanks referred to in 9.3.3.11.9 are not feasible, it must be possible to remove the cargo tanks easily for inspection.</p>	<p><i>Creation of a well-defined double-hull type N (spaces and stability in the event of damage)</i></p>
9.3.3.11.9	<p><i>Second-last sentence of the first paragraph, read:</i></p> <p>“In these spaces the free penetration width shall not be less than 0.50 m in the sector intended for the penetration.”</p>	
9.3.3.13.3	<p><i>Add a paragraph 2, to read:</i></p> <p>“For vessels with independent cargo tanks and for double-hull constructions with cargo tanks integrated in the frames of the vessel, floatability after damage shall be proved for the most unfavourable loading condition. For this purpose, calculated proof of sufficient stability shall be established for critical intermediate stages of flooding and for the final stage of flooding. Negative values of stability in intermediate stages of flooding may be accepted only if the continued range of curve of the righting lever in damaged condition indicates adequate positive values of stability.”</p>	

<p>9.3.3.14 “9.3.3.14 9.3.3.14.1 9.3.3.14.2</p>	<p><i>Read:</i> Stability (intact) For vessels with independent cargo tanks and for double-hull constructions with cargo tanks integrated in the frames of the vessel, the requirements for intact stability resulting from the damage stability calculation shall be fully complied with.” “For vessels with cargo tanks of more than 0.70 B in width, proof shall be furnished that the following stability requirements have been complied with: (a) In the positive area of the righting lever curve up to immersion of the first non-watertight opening there shall be a righting lever (GZ) of not less than 0.10 m; (b) The surface of the positive area of the righting lever curve up to immersion of the first non-watertight opening and in any event up to an angle of heel $\leq 27^\circ$ shall not be less than 0.024 m.rad; (c) The metacentric height (GM) shall be not less than 0.10 m. These conditions shall be met bearing in mind the influence of all free surfaces in tanks for all stages of loading and unloading.”</p>	
<p>9.3.3.15 “9.3.3.15 9.3.3.15.1</p>	<p><i>Read:</i> Stability (damaged condition) For vessels with independent cargo tanks and for double-hull constructions with cargo tanks integrated in the frames of the vessel, the following assumptions shall be taken into consideration for the damaged condition: (a) The extent of side damage is as follows: longitudinal extent: at least 0.10 L, but not less than 5.00 m; transverse extent: 0.59 m; vertical extent: from the base line upwards without limit.</p>	

	<p>(b) The extent of bottom damage is as follows:</p> <p>longitudinal extent: at least 0.10 L, but not less than 5.00 m;</p> <p>transverse extent: 3.00 m;</p> <p>vertical extent: from the base 0.49 m upwards, the sump excepted.</p> <p>(c) Any bulkheads within the damaged area shall be assumed damaged, which means that the location of bulkheads shall be chosen so as to ensure that the vessel remains afloat after the flooding of two or more adjacent compartments in the longitudinal direction.</p> <p>The following provisions are applicable:</p> <ul style="list-style-type: none"> – For bottom damage, adjacent athwartship compartments shall also be assumed as flooded; – The lower edge of any non-watertight openings (e.g. doors, windows, access hatchways) shall, at the final stage of flooding, be not less than 0.10 m above the damage waterline; – In general, permeability shall be assumed to be 95%. Where an average permeability of less than 95% is calculated for any compartment, this calculated value obtained may be used. <p>However, the following minimum values shall be used:</p> <ul style="list-style-type: none"> – engine rooms: 85%; – accommodation: 95%; – double bottoms, oil fuel tanks, ballast tanks, etc., depending on whether, <ul style="list-style-type: none"> according to their function, they have to be assumed as full or empty. for the vessel floating at the maximum permissible draught: 0% or 95%. <p>For the main engine room only the one-compartment standard need be taken into account, i.e. the end bulkheads of the engine room shall be assumed as not damaged.</p>	
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<p>9.3.3.15.2</p>	<p>At the stage of equilibrium (final stage of flooding), the angle of heel shall not exceed 12°. Non-watertight openings shall not be flooded before reaching the stage of equilibrium. If such openings are immersed before that stage, the corresponding spaces shall be considered as flooded for the purpose of the stability calculation.</p> <p>The positive range of the righting lever curve beyond the stage of equilibrium shall have a righting lever of ≥ 0.05 m in association with an area under the curve of ≥ 0.0065 m.rad. The minimum values of stability shall be satisfied up to immersion of the first non-watertight opening and in any event up to an angle of heel $\leq 27^\circ$. If non-watertight openings are immersed before that stage, the corresponding spaces shall be considered as flooded for the purposes of stability calculation.</p>	
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<p>9.3.3.15.3</p>	<p>If openings through which undamaged compartments may additionally become flooded are capable of being closed watertight, the closing appliances shall be marked accordingly.</p>	
<p>9.3.3.15.4</p>	<p>Where cross- or down-flooding openings are provided for reduction of unsymmetrical flooding, the time for equalization shall not exceed 15 minutes, if during the intermediate stages of flooding sufficient stability has been proved.”</p>	

<p>9.3.1.56.6 “9.3.2.56.6</p> <p>“9.3.3.56.6</p>	<p><i>Add 9.3.x.56.6 to read:</i></p> <p>“The cables required for the electrical equipment referred to in 9.3.1.52.1 (b) and (c)/9.3.2.51.1 (b) and (c) are accepted in cofferdams, double-hull spaces, double bottoms, hold spaces and service spaces below deck.”</p> <p>The cables required for the electrical equipment referred to in 9.3.3.52.1 (b) and (c) are accepted in cofferdams, double-hull spaces, double bottoms, hold spaces and service spaces below deck. When the vessel is only authorized to carry substances for which no anti-explosion protection is required in column (17) of Table C in Chapter 3.2, cable penetration is permitted in the hold spaces.”</p>	<p><i>Clarification of places where electrical cables may be installed</i></p>
<p>9.3.2.21.7 9.3.3.21.7</p>	<p><i>Paragraph 3, amend to read:</i></p> <p><i>First sentence, replace:</i> “or a vacuum pressure of 1.1 times the opening pressure of the vacuum valve” <i>by</i></p> <p>“or a vacuum pressure equal to the construction vacuum pressure but not exceeding 5 kPa.”</p>	<p><i>The alarm will be activated at a fixed vacuum pressure based on the construction vacuum pressure</i></p>
<p>9.3.2.25.9 9.3.3.25.9</p> <p>9.3.3.25.9</p>	<p><i>At the end of the second paragraph, replace:</i></p> <p>“vacuum pressure: 110% of the opening pressure of the vacuum valve but not more than 3.85 kPa (0.0385 bar)” <i>by</i></p> <p>“vacuum pressure: not more than the construction vacuum pressure but not exceeding 5 kPa (0.05 bar).”</p> <p><i>Concerns the German version only</i></p>	