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Working Party on Inland Water Transport

Working Party on the Standardization of Technical
and Safety Requirements in Inland Navigation

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Item 3 (c) of the provisional agenda

**AMENDMENTS TO THE RECOMMENDATIONS ON HARMONIZED EUROPE-WIDE
TECHNICAL REQUIREMENTS FOR INLAND NAVIGATION VESSELS (ANNEX TO
RESOLUTION NO. 61): OTHER AMENDMENTS TO RESOLUTION NO. 61**

Proposed amendments to Directive 2006/87/EC
laying down technical requirements for inland waterway vessels

Note by the Secretariat

INTRODUCTION

1. It is recalled that at its forty-nine session, the Working Party on Inland Water Transport approved the Inventory of existing legislative obstacles that hamper the establishment of a harmonized and competitive Pan-European inland navigation market supplemented with recommendations as to how to overcome the obstacles identified, prepared by its Group of Volunteers on Legislative Obstacles (TRANS/SC.3/168, para.20). The Inventory recognized the importance of harmonization, to the largest extent possible, of the European regimes of technical requirements for inland navigation vessels, including, the UNECE Recommendations on Technical Requirements for Inland Navigation Vessels, the CCNR Regulation on the Survey of Rhine Vessels, the Danube Commission's Recommendations on Technical Requirements for Inland Navigation Vessels and the relevant EU legislation in this area (the EU Directive 82/714/EEC, nowadays repealed by Directive 2006/87/EC) (TRANS/SC.3/2005/1, para.39).

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2. The work on the harmonization between the technical requirements on the Rhine and in the European Union is being carried out by a Joint Working Group of experts from the Member states of the European Union and the Central Commission for Navigation on the Rhine. The Danube Commission and Sava Commission also participate in this work.

3. At its meeting in January 2008, the group adopted a set of proposals to amend Annex II of the directive, which specifies the minimum technical requirements applicable to vessels on inland waterways in zones 1, 2, 3 and 4. The note below reproduces the proposed amendments, with the exception of the linguistic corrections, as well as the provisions on the unique European Identification number, considered separately under agenda item 3 a). The proposed amendments to Chapter 24 (left void in resolution No. 61) are not listed. The full text of amendments can be found in Document JWG (07) 66 available from European Commission and the CCNR. For each article of the directive, the reference to the corresponding provision in resolution No. 61 is given in a footnote.

4. The Working Party may wish to take note of these planned changes to the directive and to instruct the secretariat on the procedure to adopt in order to ensure that these amendments are reflected, if needed, in resolution No. 61 with the Recommendations on Harmonized Europe-wide Technical Requirements for Inland Navigation vessels.

PROPOSED AMENDMENTS TO THE ANNEX II OF DIRECTIVE 2006/87/EC LAYING DOWN TECHNICAL REQUIREMENTS FOR INLAND WATERWAY VESSELS

I. PROPOSED AMENDMENTS TO CHAPTER 6, "STEERING SYSTEM"

5. Article 6.02(1)^{1/} shall be replaced by the following:

"1. If the steering apparatus has a powered drive unit, a second independent drive unit or an additional manual drive shall be present. In case of failure or malfunction of the drive unit of the rudder system, the second independent drive unit or the manual drive has to be in operation within 5 seconds."

6. Article 6.03^{2/} shall be replaced by the following:

"Article 6.03

Hydraulic steering apparatus drive unit

1. No other power consumers may be connected to the hydraulic steering apparatus drive unit.
2. Hydraulic tanks are to be equipped with a warning system that monitors a dropping of the oil level below the lowest content level needed for safe operation.
3. The dimensions, design and arrangement of the pipe work shall as far as possible exclude mechanical damage or damage resulting from fire.

^{1/} Article 6-2.1 in the annex to Resolution No. 61.

^{2/} Article 6-3 in the annex to Resolution No. 61.

4. Hydraulic hoses are:
 - a) only permissible, if vibration absorption or freedom of movement of components makes their use inevitable;
 - b) to be designed for at least the maximum service pressure;
 - c) to be renewed at the latest every eight years.
5. Hydraulic cylinders, hydraulic pumps and hydraulic motors as well as electric motors shall be examined at the latest every eight years by a specialized firm and repaired if required."^{3/}
7. Article 6.07(2)^{4/} shall be amended as follows:
 - a) The introductory sentence part shall be amended as follows: "In the following cases an optical and acoustic alarm has to be present at the steering position:"
 - b) Letter a) shall be replaced by the following: "a) oil level of the hydraulic tanks falling under the lowest content level in accordance with Article 6.03(2) and decrease of service pressure of the hydraulic system;"
8. Article 6.09^{5/} shall be replaced by the following:

"Article 6.09

Acceptance and periodical inspections

1. The correct installation of the steering system is to be inspected by an inspection body. For this purpose the inspection body can require the following documents:
 - a) Description of the steering system;
 - b) Drawings and information on the steering apparatus drive units and the steering control;
 - c) Information concerning the steering apparatus;
 - d) Electrical wiring diagram;
 - e) Description of the rate of turn regulator;
 - f) Operating and maintenance instructions for the steering system.
2. Operation of the entire steering system shall be checked by means of a navigation test. If a rate-of turn regulator is installed it shall be checked that a predetermined

^{3/} Paragraph 5 is absent in Article 6-3 in the annex to Resolution No. 61.

^{4/} Article 6-7.2 in the annex to Resolution No. 61.

^{5/} Article 6-9 in the annex to Resolution No. 61.

course can be reliably maintained and that bends can be negotiated safely.

3. Power driven steering systems are to be inspected by an expert:
 - a) before being put into service;
 - b) after failure;
 - c) after any modification or repair;
 - d) regularly at least every three years.
4. The inspection has to cover at least:
 - a) a check on conformity with the approved drawings and at periodical inspections whether alterations in the steering system were made;
 - b) a functional test of the steering system for all operational possibilities;
 - c) a visual check and a tightness check of the hydraulic components, in particular valves, pipelines, hydraulic hoses, hydraulic cylinders, hydraulic pumps, and hydraulic strainers;
 - d) a visual check of the electrical components, in particular relays, electric motors and safety devices;
 - e) a check of the optical and acoustic control devices.
5. An inspection certificate, signed by the inspector, shall be issued, showing the date of inspection."

II. PROPOSED AMENDMENTS TO CHAPTER 7, "WHEELHOUSE"

9. Article 7.02 (2) ^{6/} shall be amended as follows:
 - a) The first sentence shall be amended as follows: "The area of obstructed vision for the helmsman ahead of the vessel in an unladen state with half of its supplies but without ballast shall not exceed two vessel lengths or 250 m whichever is less, to the surface of the water."
 - b) The last sentence of Section 6 ^{7/} shall be amended as follows: "To avoid reflections, the bridge front windows shall be glare-free or fitted so as to exclude reflections effectively. This requirement shall be deemed to be fulfilled when the windows are inclined from the vertical plane, so as to form an outward angle of not less than 10° and not more than 25°."

^{6/} Article 7-2.2 in the annex to Resolution No. 61.

^{7/} Section 6 is absent in Article 7-2.2 in the annex to Resolution No. 6.

III. PROPOSED AMENDMENTS TO CHAPTER 8, "ENGINE DESIGN"

10. Article 8.05(7)^{8/} shall be replaced by the following:

"7. Directly at tank outlets the pipework for the distribution of fuels shall be fitted with a quick-closing valve that can be operated from the deck, even when the rooms in question are closed.

If the operating device is concealed, the lid or cover shall not be lockable.

The operating device shall be marked in red. If the device is concealed it shall be marked with a symbol for the quick-closing valve in accordance with Fig. 9 of Appendix I with a side length of at least 10 cm.

The first sentence shall not apply to fuel tanks mounted directly on the engine."

IV. PROPOSED AMENDMENTS TO CHAPTER 9, "ELECTRICAL EQUIPMENT"

11. Article 9.15(9)^{9/} shall be replaced by the following:

"9. Terminations and joints in all conductors shall be so made as to retain the original electrical, mechanical, flame-retardant and, where necessary, fire resistant properties. The number of cable joints shall be kept to a minimum."

V. PROPOSED AMENDMENTS TO CHAPTER 10, "EQUIPMENT"

12. Article 10.03a^{10/} shall be amended as follows:

- a) Section 8 shall be replaced by the following: "8. An inspection certificate, signed by the expert, shall be issued, showing the date of inspection."
- b) Section 10 shall be deleted.

13. Article 10.03b^{11/} shall be amended as follows:

- a) After Section 1, letter c), letter d) shall be inserted as follows: "d) FK-5-1-12 (Dodecafluoro-2-methylpentane-3-on)."
- b) Section 4 letter b shall be amended as follows: "b) Outlet nozzles shall be dimensioned and fitted such that the extinguishing agent is evenly distributed. In particular the extinguishing agent shall also be effective beneath the floor plates."
- c) Section 5 letter e, cc shall be amended as follows: "cc) action taken by the crew when the fire-fighting system is triggered and when accessing the protected room

^{8/} Article 8-1.5.9 in the annex to Resolution No. 61.

^{9/} Absent in the annex to Resolution No. 61.

^{10/} Articles 10-3.1 to 10-3.3 in the annex to Resolution No. 61.

^{11/} This specific provision is absent in Chapter 10 in the annex to Resolution No. 61.

after triggering or flooding, in particular with regard to the possible presence of dangerous substances;"

d) Section 9(e) shall be replaced by the following: "e) An inspection certificate, signed by the expert, shall be issued, showing the date of inspection."

e) Section 13 shall be replaced by the following:

"13. FK-5-1-12 - fire fighting systems

Fire-fighting systems using FK-5-1-12 as the extinguishing agent shall comply with the following provisions in addition to the requirements under paragraphs 1 to 9:

- a) if there are several rooms to be protected, each with a different gross volume, each room shall be provided with its own fire-fighting system;
- b) each container of FK-5-1-12 that is installed in the room to be protected shall be equipped with an overpressure relief valve. This shall harmlessly release the contents of the container into the room to be protected if the container is exposed to the effects of fire and the fire-fighting system has not been triggered;
- c) each container shall be fitted with a device for checking the gas pressure;
- d) the containers shall not be filled to more than 1,00 kg/l. The specific volume of the unpressurised FK-5-1-12 is to be taken as 0,0719 m³/kg;
- e) the volume of FK-5-1-12 for the room to be protected shall be at least 5.5% of the room's gross volume. This volume shall be supplied within 10 seconds.
- f) the FK-5-1-12 containers shall be provided with a pressure monitor which triggers an acoustic and optical alarm signal in the wheelhouse in the event of an unauthorised loss of propellant. If there is no wheelhouse, this alarm signal shall be given outside the room to be protected;
- g) after flooding, the concentration in the room to be protected shall not exceed 10,0 %."

14. After Article 10.03b a new Article 10.03c shall be inserted:

"Article 10.03c

Permanently installed fire-fighting systems for protecting objects

For protecting objects permanently installed fire-fighting systems shall be permissible only on the basis of recommendations from the Committee."

15. Article 10.05(2) ^{12/} 1st sentence shall be amended as follows:

"2. A personalised, automatically inflatable lifejacket in accordance with European standards EN 395 : 1998, EN 396 : 1998, EN ISO 12402-3 : 2006 or EN ISO 12402-4 : 2006 shall be within reach of every person who is regularly on board a craft."

VI. PROPOSED AMENDMENTS TO CHAPTER 14, "LIQUEFIED GAS INSTALLATION FOR DOMESTIC PURPOSES"

16. Article 14.13 ^{13/} shall be amended as follows:

"The following sentence shall be added after the 2nd sentence: "Additionally, for passenger vessels the expert shall verify whether a valid inspection certificate on the correct installation of the gas alarm system according to Article 15.15(9) or its inspection is available."

VII. PROPOSED AMENDMENTS TO CHAPTER 15, "SPECIFIC REQUIREMENTS APPLICABLE TO PASSENGER VESSELS"

17. Article 15.03 ^{14/} shall be amended as follows:

a) The following sentence shall be added to section 1: "The lightship data taken into account for the stability calculation shall be determined by means of a heeling test."

b) In section 2, third sentence, the introductory part of the sentence shall be amended as follows: "In addition, the requirement of section 3(d) shall be proved for the following load condition:"

c) Section 2, last sentence is deleted.

d) Section 3, (a) to (c), shall be amended as follows:

"a) the maximum righting lever h_{\max} shall occur at a heeling angle of $\varphi_{\max} \geq (\varphi_{\text{mom}} + 3^\circ)$ and shall not be less than 0,20 m. However, in case $\varphi_f < \varphi_{\max}$ the righting lever at the downflooding angle φ_f shall not be less than 0,20 m;

b) the downflooding angle φ_f shall not be less than $(\varphi_{\text{mom}} + 3^\circ)$;

c) the area A under the curve of the righting levers shall, depending on the position of φ_f and φ_{\max} , reach at least the following values:

^{12/} Article 10-5.2.2.2, 10-5.2.2.3 in the annex to Resolution No. 61.

^{13/} Article 14-13 in the annex to Resolution No. 61.

^{14/} Article 15-3 in the annex to Resolution No. 61.

Case			A
1	$\varphi_{max} \leq 15^\circ$ or $\varphi_f \leq 15^\circ$		0,05 m rad up to the smaller of the angles φ_{max} or φ_f
2	$15^\circ < \varphi_{max} < 30^\circ$	$\varphi_{max} \leq \varphi_f$	$0,035 + 0,001 \cdot (30 - \varphi_{max})$ m-rad up to the angle φ_{max}
3	$15^\circ < \varphi_f < 30^\circ$	$\varphi_{max} > \varphi_f$	$0,035 + 0,001 \cdot (30 - \varphi_f)$ m-rad up to the angle φ_f
4	$\varphi_{max} \geq 30^\circ$ and $\varphi_f \geq 30^\circ$		0,035 m-rad up to the angle $\varphi = 30^\circ$

Where:

h_{max} is the maximum lever

φ the heeling angle

φ_f the downflooding angle, that is the heeling angle, at which openings in the hull, in the superstructure or deck houses which cannot be closed so as to be watertight, submerge

φ_{mom} the maximum heeling angle according to (e);

φ_{max} the heeling angle at which the maximum righting lever occurs

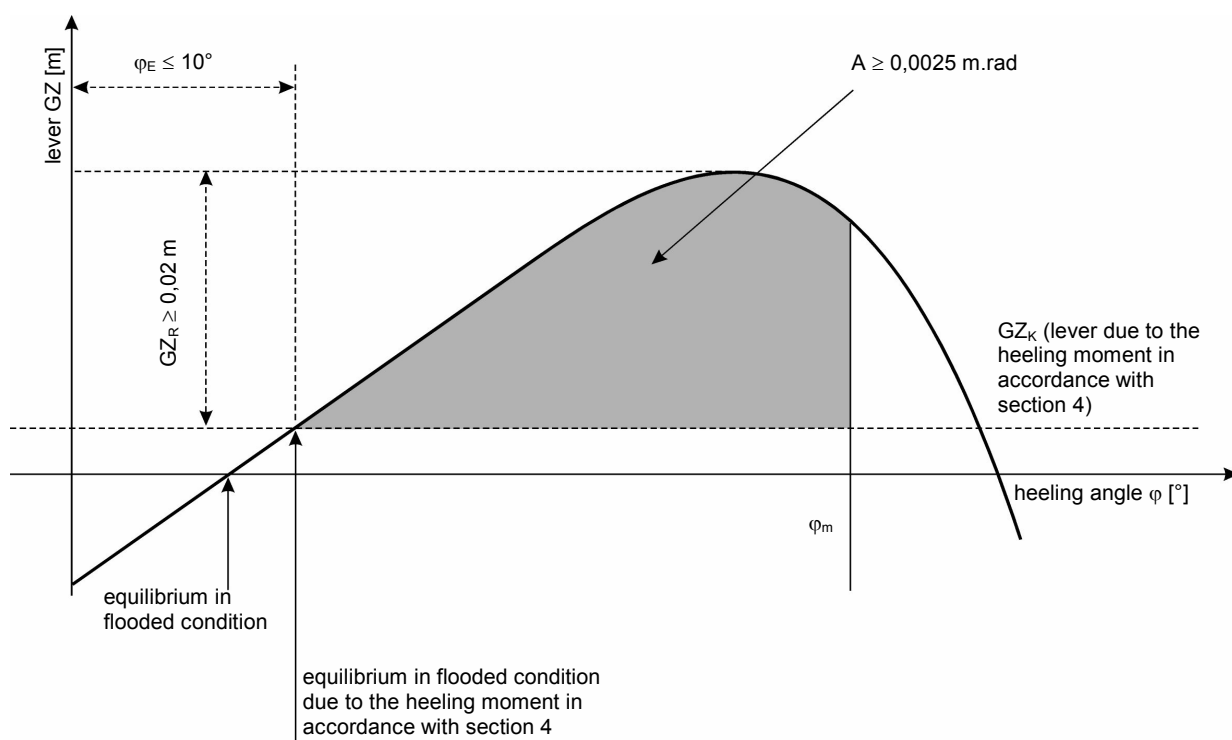
A area under the curve of the righting levers."

- e) Section 3(e), first sentence shall be amended as follows: "e) In each of the following two cases the heeling angle φ_{mom} shall not exceed 12° ."
- f) Section 4, paragraph 12, shall be amended as follows: " $n_i = 3.75$ for free deck areas and deck areas with movable furniture; for deck areas with fixed seating furniture such as benches, n_i shall be calculated by assuming an area of 0.50 m in width and 0.75 m in seat depth per person; "
- g) The table after section 9, second sentence, shall be replaced by the following:

"

	1-compartment status	2-compartment status
Dimension of the side damage		
longitudinal l [m]	$0,10 \cdot L_{WL}$, however not less than 4,00 m	$0,05 \cdot L_{WL}$, however not less than 2,25 m
transverse b [m]	B/5	0,59
vertical h [m]	from vessel bottom to top without delimitation	
Dimension of the bottom damage		
longitudinal l [m]	$0,10 \cdot L_{WL}$, however not less than 4,00 m	$0,05 \cdot L_{WL}$, however not less than 2,25 m
transverse b [m]	B/5	
vertical h [m]	0,59; pipework installed according to Article 15.02(13)(c), shall be deemed intact	

- h) Section 9(a), last sentence, shall be amended as follows: "Longitudinal bulkheads at a distance of less than $B/3$ from the outer plating measured perpendicular to the centre line from the shell plating at the maximum draught shall not be taken into account for calculation purposes".
- i) Section 9(d) last sentence is deleted.
- j) The following letter (d) shall be added to section 10: "d) The calculation of the free surface effect in all intermediate stages of flooding shall be based on the gross surface area of the damaged compartments."
- k) Section 11, sentence 1, shall be amended as follows: "11. During the final stage of flooding, the following criteria shall be met taking into account the heeling moment in accordance with section 4:"
- l) Section 11(b) shall be amended as follows: "b) beyond the equilibrium position the positive part of the righting lever curve shall display a righting lever value of $GZ_R \geq 0,02$ m with an area $A \geq 0,0025$ m.rad. These minimum values for stability shall be met until the immersion of the first unprotected opening or in any case before reaching a heeling angle $\varphi_m \leq$ of 25° .



Where:

- φ_E is the heeling angle in the final stage of flooding taking into account the moment in accordance with section 4;
- φ_m is the angle of vanishing stability or the angle at which the first unprotected opening immerses or 25° ; whichever is less is to be used;

GZ_R is the remaining righting lever in the final stage of flooding taking into account the moment in accordance with section 4;

GZ_K is the heeling lever resulting from the moment in accordance with section 4."

m) The former diagram in section 11 after (b) is deleted.

18. Article 15.06 ^{15/} shall be amended as follows:

a) The following sentence shall be added to section 3(a): "Rooms, with the exception of cabins, or groups of rooms that have only one exit, shall have at least one emergency exit."

b) Section 8(a), sentence 1 shall be replaced by the following: "The total area of the muster areas (A_S) shall correspond to at least the following value:"

19. Article 15.09 ^{16/} shall be amended as follows:

a) Section 2 shall be replaced by the following: "2. In addition to the lifebuoys referred to in section 1, individual life-saving equipment according to Article 10.05, section 2, shall be within reach for all shipboard personnel. For shipboard personnel not responsible for undertaking duties according to the safety rota not inflatable or semi-automatically inflatable lifejackets according to the standards mentioned in Article 10.05, section 2, are allowed."

b) Section 4, sentence 1 shall be replaced by the following: "4. In addition to the life-saving equipment referred to in sections 1 and 2, individual life-saving equipment according to Article 10.05, section 2, shall be available for 100 % of the maximum permitted number of passengers. Not inflatable or semi automatically inflatable lifejackets according to the standards mentioned in Article 10.05, section 2, are also allowed."

c) Section 4, second sentence, shall be deleted.

20. Article 15.10(6) ^{17/}, last sentence, shall be replaced by the following:

"The emergency power plant shall be installed either above the margin line or as far away as possible from the power sources according to Article 9.02(1), so as to ensure that, in the event of flooding in accordance with Article 15.03(9), it is not flooded at the same time as these power sources."

^{15/} Article 15-6 in the annex to Resolution No. 61.

^{16/} Article 15-9 in the annex to Resolution No. 61.

^{17/} Paragraph 6 is absent in Article 15-10 in the annex to Resolution No. 61.

21. Article 15.11^{18/} shall be amended as follows:

- a) Section 1(d)(aa) shall be replaced by the following: "aa) Annex I, part 3, of the Code for Fire Test Procedures, and"
- b) After Section 1(d) a new section 1(e) shall be added: "e) The inspection body may, in accordance with the Code for Fire Test Procedures, prescribe a test on a sample partition in order to ensure compliance with the provisions of section 2 on resistivity and temperature increase."
- c) Section 2 shall be amended as follows:

"2. a) Partitions between rooms shall be designed in accordance with the following tables:

- aa) Table for partitions between rooms, in which no pressurised sprinkler systems according to Article 10.03a are installed

Rooms	Control centres	Stairwells	Muster areas	Lounges	Engine rooms	Galleys	Store rooms
Control centres	-	A0	A0/B15 ^{1/}	A30	A60	A60	A60
Stairwells		-	A0	A30	A60	A60	A60
Muster areas			-	A30/B15 ^{2/}	A60	A60	A60
Lounges				-/B15 ^{3/}	A60	A60	A60
Engine rooms					A60/A0 ^{4/}	A60	A60
Galleys						A0	A60/B1 ^{5/}
Store rooms							-

^{1/} Partitions between control centres and internal muster areas shall correspond to Type A0, but external muster areas only to Type B15.

^{2/} Partitions between lounges and internal muster areas shall correspond to Type A30, but external muster areas only to Type B15.

^{3/} Partitions between cabins, partitions between cabins and corridors and vertical partitions separating lounges according to section 10 shall comply with Type B15, for rooms fitted with pressurised sprinkler systems B0.

^{4/} Partitions between engine rooms according to Articles 15.07 and 15.10, section 6, shall comply with Type A60; in other cases they shall comply with Type A0.

^{5/} B15 is sufficient for partitions between galleys, on the one hand, and cold-storage rooms and food store rooms, on the other.

^{18/} Article 15-11 in the annex to Resolution No. 61.

- bb) Table for partitions between rooms, in which pressurised sprinkler systems according to Article 10.03a are installed.

Rooms	Control centres	Stairwells	Muster areas	Lounges	Engine rooms	Galleys	Store rooms
Control centres	-	A0	A0/B15 ^{19/}	A0	A60	A30	A30
Stairwells		-	A0	A0	A60	A30	A0
Muster areas			-	A30/B15 ^{20/}	A60	A30	A30
Lounges				-/B0 ^{21/}	A60	A30	A0
Engine rooms					A60/A04	A60	A60
Galleys						-	B15
Store rooms							-

- e) Former Section 2 (a) shall be renamed to Section 2 (b)
- f) Former Section 2 (b) shall be renamed to Section 2 (c)
- g) Former Section 2 (c) shall be deleted.
22. Article 15.12^{19/} shall be amended as follows:
- a) Section 10(b) shall be replaced by the following: "(b) two sets of equipment consisting of at least a protective suit, helmet, boots, gloves, axe, crowbar, torch and safety-line;"
23. Article 15.15^{20/} shall be amended as follows:
- a) Section 1, first sentence, shall be replaced by the following: "Passenger vessels authorised to carry up to a maximum of 50 passengers and with a length L_{WL} of not more than 25 m shall prove adequate stability after damage according to Article 15.03 (7 to 13) or, as an alternative, prove that they comply with the following criteria after symmetrical flooding:"
- b) Section 5, first sentence, shall be replaced by the following: "The inspection body may waive the application of Article 10.04 in the case of passenger vessels authorised to carry up to a maximum of 250 passengers and with a length L_{WL} of not more than 25 m, provided they are equipped with a platform, accessible from each side of the vessel, directly above the line of flotation, so as to enable persons to be recovered from the water."
- c) In section 10 the introductory first sentence shall be replaced by the following: "The following provisions shall not apply to passenger vessels with a length L_{WL} not exceeding 25 m:"

^{19/} Article 15-12 in the annex to Resolution No. 61.

^{20/} Article 15-14 in the annex to Resolution No. 61.

VIII. PROPOSED AMENDMENTS TO CHAPTER 21, "SPECIFIC REQUIREMENTS APPLICABLE TO RECREATIONAL CRAFT" ^{21/}


24. Article 21.02 shall be amended as follows:

- a) In section 1(g) after the reference to "Article 10.03b" the following reference shall be inserted: "Article 10.03c"
- b) In section 2(d) the reference to "Article 10.07" shall be replaced by the following: "Article 10.05".

IX. PROPOSED AMENDMENTS TO APPENDIX I OF DIRECTIVE 2006/87/EC

25. The following safety sign for quick-closing valves according to Figure 9 shall be added to Appendix I of Directive 2006/87/EC ^{22/} after figure 8 as shown below:

Safety signs

<p>Figure 9 Quick-closing valve on the tank</p>		<p>Colour: brown/white</p>
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^{21/} Chapter 21 is currently being drafted by the group of volunteer experts of SC.3.
^{22/} Appendix 3 to the annex to Resolution No. 61.