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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on Inland Water Navigation  
(Forty-sixth session, 22-24 October 2002,  
agenda item 7 (a))

**AMENDMENT OF THE RECOMMENDATIONS ON TECHNICAL  
REQUIREMENTS FOR INLAND NAVIGATION VESSELS  
(ANNEX TO RESOLUTION NO. 17, REVISED)**

Addendum 2

Note by the secretariat

The Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation, at its twenty-third session, considered the draft amended text of chapters 11*bis* and 13 of the annex, as transmitted to it by the ad hoc group of experts and reflected in TRANS/SC.3/WP.3/AC.2/2001/1, modified the text as indicated in TRANS/SC.3/WP.3/47, para. 10 and requested the secretariat to submit them to the Working Party on Inland Water Transport for consideration and provisional approval (TRANS/SC.3/WP.3/47, para. 11).

The text of the chapters 11*bis* "Movable wheelhouses" and 13 "Life-saving appliances" is reproduced below for consideration by the Working Party on Inland Water Transport.

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**CHAPTER 11 *BIS***  
**MOVABLE WHEELHOUSES**

11 bis-1            GENERAL REQUIREMENTS

11 bis-1.1           Movable wheelhouses should be fitted with an emergency lowering system. All lowering operations should automatically trigger an audible warning signal. That requirement shall not apply if the risk of corporal injury which may result from lowering is prevented by appropriate design features.

It must be possible to leave the wheelhouse safely whatever its position.

11 bis-1.2           A vertically movable wheelhouse and its gear shall be designed in such a way as not to adversely affect the safety of persons on board.

11 bis-1.3           Hoisting and lowering shall not interfere with operations performed from the wheelhouse.

11 bis-2            REQUIREMENTS RELATING TO CONSTRUCTION

11 bis-2.1           The hoisting mechanism shall be designed to hoist at least 1.5 times the weight of the wheelhouse fully equipped and fully manned.

11 bis-2.2           The mechanism for hoisting the wheelhouse shall function reliably and without jamming under all possible conditions of asymmetrical load as well as at all angles of ship's list and trim which could occur during its normal operation.

11 bis-2.3           The wheelhouse shall be earthed.

11 bis-2.4           The feed cables for systems inside the wheelhouse shall be laid and fastened in such a way as to exclude the possibility of mechanical damage to them.

11 bis-2.5           The device for fastening the cables may also be used for laying hoses or pipes leading into the wheelhouse. The distance between such hoses or pipes and the cables shall be not less than 100 mm.

11 bis-2.6           Optical signalling of the following positions shall be provided:

- (i)    Electric drive switchboard live;
- (ii)   Wheelhouse in lower terminal position;
- (iii)   Wheelhouse in upper terminal position.

11 bis-3 REQUIREMENTS RELATING TO THE HOISTING GEAR DRIVE

11 bis-3.1 The gear for hoisting and lowering the wheelhouse shall have a power drive capable of functioning under all conditions of the ship's operation.

11 bis-3.2 Emergency lowering of the wheelhouse shall be effected under its own weight and shall be smooth and controllable.

11 *bis*-3.3 The hoisting mechanism shall enable the wheelhouse to stop and remain in any position.

On board ships intended for zones 1 and 2 the [Competent Authorities]<sup>1</sup> may require that it shall be possible to fix the wheelhouse in different positions. A possibility for immediate release of the fixing arrangements should be ensured under all operational conditions inclusive of a total power failure.

11 bis-3.4 Automatic cutting out of the hoisting mechanism in the terminal positions shall be provided.

11 bis-3.5 Lowering of the wheelhouse shall be effected by one person under all conditions. Emergency lowering control shall be possible from both inside the wheelhouse and a control station outside. The speed of emergency lowering of the wheelhouse shall be not less than the speed of lowering effected by means of the main drive.

11 bis-3.6 The use of a self-braking hoisting mechanism shall not be permitted.

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<sup>1</sup> Note by the secretariat: The group of volunteers is expected to consider the possible revision of the definition of the terms "Administration" used in the draft amended chapters, together with the terms "Competent Authorities" or "Administration of the river basin", "Recognized classification society", etc. with a view to reducing the number of terms referring to the functions and responsibilities of the State Administration and other bodies to which the State may wish to delegate those functions and responsibilities.

## CHAPTER 13

### LIFE-SAVING APPLIANCES

#### 13-1 DEFINITIONS AND EXPLANATIONS

13-1.1 Collective life-saving appliances: lifeboats, liferafts, ship's boats and life-saving buoyancy aids intended for rescue of passengers and the ship's crew.

13-1.2 Lifeboat: a boat intended for rescue of people in distress complying with the requirements of the basin Administration, [a recognized Classification Society] or IMO Code.

13-1.3 Liferaft: a raft intended for rescue of people in distress, keeping them out of the water complying with the requirements of the basin Administration, [a recognised Classification Society] or IMO Code.

13-1.4 Ship's boat: a boat used for multipurpose application including transportation of people or cargoes as well as in rescue purposes complying with the requirements of the basin Administration or the European Standard.

13-1.5 Life-saving buoyancy aids: means intended for supporting several persons overboard on the water surface.

13-1.6 Individual life-saving appliances: means intended for supporting a person overboard on the water surface. They include lifejackets and lifebuoys.

#### 13-2 COLLECTIVE LIFE-SAVING APPLIANCES

##### 13-2.1 General requirements

##### 13-2.1.1 Collective life-saving appliances shall:

- (i) carry an indication of the use and of the number of persons for which they are approved;
- (ii) have and maintain a stable trim if grabbed by the indicated number of persons;
- (iii) be fitted with a line securely fastened round the outside perimeter enabling them to be grabbed by persons being in water;
- (iv) be made of a suitable material and be resistant to oil and oil products, and to temperatures of up to 50 °C;
- (v) have a fluorescent orange colour or have permanently fixed fluorescent surfaces measuring at least 100 cm<sup>2</sup>;
- (vi) be rapidly and safely launchable from their place of storage by a single person;
- (vii) be checked in accordance with manufacturer's instructions.

##### 13-2.1.2 Inflatable life-saving appliances shall in addition to 13-2.1.1 :

- (i) comprise at least two separate air compartments;

- (ii) inflate automatically or by manual command when launched;
- (iii) have and maintain a stable trim whatever load it is supporting, even with only half of the air compartments inflated;
- (iv) be checked in accordance with the manufacturer's instructions.

### 13-2.2 Lifeboats

13-2.2.1 All lifeboats shall be well designed and of such shape and proportions that they have ample stability and sufficient freeboard when carrying their full load of persons and equipment.

13-2.2.2 All lifeboats shall be strong enough to be lowered into the water with complete safety when carrying their full load of persons and equipment. They shall be of such strength that they will not suffer permanent deformation if subjected to an overload of 25%.

13-2.2.3 Every lifeboat shall meet the following requirements:

- (i) it shall be equipped with seats sufficient for at least three persons;
- (ii) the number of persons whom the lifeboat is permitted to carry shall be determined according to its cubic capacity as calculated by the recognized methods, on the basis of not less than 0.225 m<sup>3</sup> per person. The seating capacity of the lifeboat shall be determined by tests to find out how many adults wearing lifejackets can be accommodated without interfering with the rowing and steering of the lifeboat;
- (iii) the lifeboat stability shall be adequate for the maximum number of persons it may carry; its stability shall be deemed to be adequate if, with half the maximum permissible number of persons seated on one side of the lifeboat, there remains a freeboard of not less than 100 mm;
- (iv) there shall be a seat width of not less than 0.45 m per person;
- (v) the lifeboat shall remain sufficiently buoyant and sufficiently stable when carrying its full load of persons and equipment and filled with water.

13-2.2.4 The lifeboat equipment shall meet the requirements of the basin Administration [or a recognized Classification Society].

### 13-2.3 Liferafts

13-2.3.1 Every liferaft shall be fitted with devices for mooring and towing.

13-2.3.2 Every liferaft shall be so constructed as to comprise units containing a volume of air of at least 0.096 m<sup>3</sup> (or equivalent buoyancy devices in the case of rigid liferafts), and a deck area of at least 0.372 m<sup>2</sup>, for every person it is permitted to carry.

13-2.3.3 The liferaft shall be so constructed that if it is dropped into the water from a height of 10 metres, neither the liferaft nor its equipment will be damaged.

13-2.3.4 Liferaft equipment shall comply with the requirements of the basin Administration [or a recognized Classification Society].

13-2.3.5 Inflatable liferafts are in addition to paras. 13-2.3.1 – 13-2.3.4 to meet the following requirements:

- (i) every inflatable liferaft shall be so designed that, when fully inflated and floating, it is stable in the water;
- (ii) the liferaft shall be capable of being easily righted by one person in the water if it inflates upside down;
- (iii) the liferaft shall be fitted with appropriate means of enabling persons in the water to climb on board;
- (iv) the liferaft shall be packed in a valise or container capable of withstanding hard wear and use; the liferaft in its valise or container shall float in such a way as to permit the immediate operation of the inflation system.

13-2.3.6 Rigid liferafts shall in addition to paras. 13-2.3.1 – 13-2.3.4 meet the following requirements:

- (i) rigid liferaft shall be so constructed as to retain its shape in all weather conditions, on deck and in the water;
- (ii) the deck area of the liferaft shall be situated within that part of the liferaft which affords protection to its occupants. The nature of the deck shall be such as to prevent so far as practicable the ingress of water and it shall effectively hold the occupants out of the water;
- (iii) the equipment of the liferaft shall be so stowed as to be readily accessible whichever way up the liferaft is floating.

13-2.4 Ship's boats

13-2.4.1 Ship's boats may be used as a collective life-saving appliance if complying with the requirements of 13-2.1.

13-2.4.2 The ship's boats shall meet the following requirements:

- (i) they shall be easy to steer and manoeuvre, they shall maintain their course and not drift significantly under the effect of the wind, the current or the waves;
- (ii) they shall have seats for at least three persons;
- (iii) they shall be sufficiently resistant;
- (iv) their volume shall be at least  $1.5 \text{ m}^3$ , or the product of  $L_C \times B_C \times H_C$  shall represent at least  $2.7 \text{ m}^3$ ;
- (v) their freeboard shall be at least 25 cm with three-persons of approximately 75 kg each on board;
- (vi) they shall be adequately stable. This shall be considered adequate if there is a residual freeboard of at least 10 cm when two persons of roughly 75 kg each are on one side as close as possible to the gunwale;
- (vii) their buoyancy in N with no passengers on board, but completely filled with water shall be at least equal to  $300 \times L_C \times B_C \times H_C$ ;

(viii) the following gear shall be on board:

- one set of oars;
- one mooring rope;
- one bailer.

13-2.4.3 It shall be possible for one person to launch such ship's boats safely. If a power-driven unit is used for launching it should be ensured that a failure of the power supply will not jeopardize rapid and safe launching.

13-2.4.4 Inflatable ship's boats shall be permitted provided the conditions set out in paragraphs 13-2.4.2 and 13-2.4.3 are met, that they are permanently operational and that they have several compartments.

13-2.4.5 If a ship's boat is used on a passenger vessel as a lifeboat it shall at least meet the conditions set out in paragraph 13-2.4.2. However,

- (i) seat width shall be at least 0.45 m per person, while the maximum permissible number of persons shall not exceed the product of  $3 \times L_C \times B_C \times H_C$ ;
- (ii) their stability shall be considered adequate if there is a freeboard of at least 10 cm when half of the maximum number of passengers permitted are positioned on one side of the ship's boat.

Note: In paras. 13-2.4.2 and 13-2.4.5:

$L_C$  is the ship's boat length in metres;

$B_C$  is the ship's boat width in metres;

$H_C$  is the ship's boat depth in metres.

13-2.5 Life-saving buoyancy aids

**13-2.5.1** Life-saving buoyancy aids shall provide a buoyancy of at least 100 N per person in fresh water.

13-3 INDIVIDUAL LIFE-SAVING APPLIANCES

13-3.1 General requirements

13-3.1.1 Individual life-saving appliances shall meet the following requirements:

- (i) to provide a buoyancy of at least 100 N in fresh water;
- (ii) to be made of a suitable material and be resistant to oil and oil products, and to temperatures of up to 50 °C;
- (iii) have a fluorescent orange colour or have permanently fixed fluorescent surfaces measuring at least 100 cm<sup>2</sup>;
- (iv) to be capable of supporting an iron load of 7.5 kg in fresh water for 24 hours.

13.3.2 Lifejackets

13-3.2.1 A lifejacket shall satisfy the following requirements:

- (i) it shall be capable of keeping the head of an exhausted or unconscious person above water;
- (ii) it shall be so designed as to eliminate so far as possible all risk of its being put on incorrectly; however, it shall be capable of being worn inside out;
- (iii) it shall be capable of turning the wearer's body, on entering the water, to a safe floating position slightly inclined backwards from the vertical;
- (iv) it shall be easy and quick to put on, and shall fasten securely to the body;

13-3.2.2 Inflatable life jackets shall inflate automatically and manually and may also be inflated by mouth. They shall be checked in accordance with the manufacturer's instructions.

13-3.2.3 Inflatable lifejackets shall meet the requirements of the basin Administration.

13-3.3 Lifebuoys

13-3.3.1 Lifebuoys shall meet the following requirements:

- (i) have a mass of not less than 2.5 kg;
- (ii) have an internal diameter of 0.45 m  $\pm$  10%;
- (iii) be encircled with rope which can be grasped.

13-3.3.2 At least one lifebuoy on each side of the vessel shall be fitted with a reliably secured buoyant lifeline which is not less than 25 m long.

13-4 STOWAGE AND HANDLING OF LIFE-SAVING APPLIANCES

13-4.1 Life-saving appliances shall be stored on board in such a way that in case of need it can be easily and safely reached. Concealed storage places shall be clearly signed.

13-4.2 The lifeboat launching devices - davits, falls, blocks and other gear - shall be of such strength that the lifeboats can be safely lowered on either side in unfavourable conditions of list or trim.

13-4.3 All collective life-saving appliances shall be so stowed that they can be launched as quickly as possible.

13-4.4 The lifebuoys shall be ready for use and located on deck at suitable places, but shall not be fastened into their holders. At least one lifebuoy shall be placed in the immediate vicinity of the wheelhouse.

13-4.5 Where necessary, equipment should be provided to pull launchable collective life-saving appliances towards the side of the vessel and restrain them in that position to facilitate safe embarkation.

## 13-5 NUMBER AND CAPACITY OF LIFE-SAVING APPLIANCES

## 13-5.1 General

13-5.1.1 In general, all vessels shall be provided with life-saving appliances appropriate to the navigation zone, as specified below.

## 13-5.2 Vessels navigating in zone 1

## 13-5.2.1 Vessels navigating in zone 1 shall have:

- (i) - either on each side of the vessel, one or more lifeboats of sufficient aggregate capacity to accommodate all persons on board;
  - or one or more lifeboats capable of being launched on either side of the vessel and of sufficient aggregate capacity to accommodate all persons on board;
  - or ship's boat and, on each side of the vessel, one or more liferafts of sufficient aggregate capacity to accommodate all persons on board;
- (ii) one or more liferafts of sufficient aggregate capacity to accommodate half the total number of persons on board;
- (iii) a sufficient number of lifejackets for all persons on board;
- (iv) at least four lifebuoys, of which at least two shall be equipped with a source of light if the vessel travels at night.

13-5.2.2 Vessels navigating in zone 1 need not be equipped with liferafts provided that they are equipped with lifeboats in accordance with paragraph 13-5.2.1, subparagraph (i), first item above.

## 13-5.3 Vessels navigating in zones 2 and 3

## 13-5.3.1 Vessels navigating in zones 2 and 3 shall have:

- (i) collective life-saving appliances conforming in number and capacity to the requirements of the basin Administration [or a recognized Classification Society];
- (ii) a sufficient number of lifejackets for all persons on board;
- (iii) at least three lifebuoys for smaller vessels, although two lifebuoys may be allowed by the basin Administration. At least one of these buoys shall be equipped with a source of light if the vessel travels at night.

These provisions shall not apply to unmanned vessels such as pushed barges.

## 13-5.4 Passenger vessels

13-5.4.1 Passenger vessels must be supplied additionally with lifejackets for children in quantity equal to 10 per cent of the total number of passengers.

13-6 FITTING WITH SHIP'S BOATS

13-6.1 The following vessels shall carry a ship's boat:

- (i) self-propelled vessels and manned barges of more than 150 tonne dwt;
- (ii) tugs and pushers of more than 150 m<sup>3</sup> displacement;
- (iii) floating equipment (floating cranes, dredgers etc.);
- (iv) passenger vessels [authorized to carry more than 250 passengers or fitted with more than 50 beds]<sup>2</sup>.

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<sup>2</sup> Note by the secretariat: Given the latest RVBR developments the group of volunteers proposed to delete the text in brackets. The Working Party SC.3 may wish to decide as appropriate.