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**ECONOMIC COMMISSION FOR EUROPE
INLAND TRANSPORT COMMITTEE**

Working Party on Inland Water Transport

(Forty-seventh session, 7-9 October 2003,
agenda item 7 (a))

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

Addendum 3

Note by the secretariat

The Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation, at its twenty-fifth session, considered the text of new draft amended chapters 7 "Hoisting gear, rigging and equipment", 10B "Wheelhouse" and 14 "Pushers, pushed barges and pushed and towed convoys" of the annex to resolution No.17, reflected in TRANS/SC.3/WP.3/AC.2/2002/1, TRANS/SC.3/WP.3/2003/3 and TRANS/SC.3/WP.3/AC.2/2002/1/Add.1, modified the text as indicated in TRANS/SC.3/WP.3/51, paras. 7 and 28 and requested the secretariat to submit them to the Working Party on Inland Water Transport for consideration and provisional approval (TRANS/SC.3/WP.3/51, paras. 8 and 30).

The text of the draft amended chapters is reproduced below for consideration by the Working Party on Inland Water Transport.

CHAPTER 7

HOISTING GEAR, RIGGING AND EQUIPMENT

7-1 - MASTS FITTED WITH HOISTING GEAR

7-1.1 - Masts for supporting derricks shall be made of standardized material or materials approved by a recognized Classification Society.

7-1.2 - The masts shall be suitably fixed to the vessel and shall be built to adequate scantlings, account being taken of the maximum load on the derricks they are intended to support.

7-2 - DERRICKS AND OTHER HOISTING GEAR

7-2.1 - Hoisting gear (including masts and derricks) and all fixed or movable fittings used on board for loading or unloading shall comply with the requirements of the Convention concerning Occupational Safety and Health in Dock Work 1979 (Convention No. 152) adopted by the International Labour Office.

7-2.2 - Hoisting gear other than mentioned in 7-2.1 shall meet the requirements of the Administration.

7-3 MISCELLANEOUS EQUIPMENT

7-3.1 All manned vessels shall be provided with at least the following equipment:

- The appliances and devices needed for the emission of visual and acoustic signals and for marking the vessel;
- Spare lamps for the navigation lights or an emergency power source for the navigation lights;
- A pair of ship's binoculars;
- A loud-hailer;
- A gangway at least 0.4 m wide and 4 m long, fitted with a hand-rail; the inspection body may permit shorter gangways for small vessels;
- A sounding device;
- A boathook;
- A suitable equipment for stopping minor leaks;
- A first-aid kit;
- A notice concerning the rescue of men overboard;
- Two heaving-lines;
- Radio telephone system.

7-3.2 In addition to the requirements of 7-3.1, manned vessels navigating in zone 2 shall be provided with:

- A fixed compass;
- Availability of nautical charts.

An echo sounder or a sounding lead.

7-3.3 In addition to the requirements of 7-3.1 and 7-3.2 manned vessels navigating in zone 1 shall be provided with:

- Spare lamps for the navigation lights;
- A radio set for receiving weather reports;
- A chronometer at the helmsman's ^{1/} station;
- A pilot-ladder;
- Covers for windows, skylights and other openings which may let in water.

CHAPTER 10B

WHEELHOUSE

10B-1 GENERAL REQUIREMENTS

10B-1.1 It shall be possible to control and monitor propelling machinery and steering gear from the wheelhouse ^{2/}. Propelling machinery fitted with a clutch which can be operated from the wheelhouse ^{2/} or actuating a rudder propeller which can be operated from the wheelhouse ^{2/} may be started and stopped only from the engine room.

10B-1.2 Every engine shall be controlled by a single lever moving through the arc of a circle in a vertical plane more or less parallel to the longitudinal axis of the vessel. Forward movement of the lever shall cause the vessel to move forward and movement of the lever towards the stern shall cause the vessel to move astern. Engaging ^{3/} and reversing the engine shall be carried out by the lever. The neutral position of the lever shall be indicated by a perceptibly distinguishable click or by a perceptibly distinguishable marking. The sweep of the lever from the neutral position to the "full speed ahead" position and from the neutral position to the "full speed astern" position shall not exceed 90°.

^{1/} Note by the secretariat: It is suggested to use the terms "steering station" in English, "poste de gouverne" in French (used in original text of RVBR) and "rulevoy post" in Russian (see also TRANS/SC.3/WP.3/2004/1, article 9(1)(a)).

^{2/} Note by the secretariat: See footnote 1 above.

^{3/} Note by the secretariat: At the twenty-fifth session of the Working Party SC.3/WP.3, the delegation of the Russian Federation was not sure if in paragraph 10B-1.2, the term "l'embrayage" in French and "engaging" in English had been correctly translated into Russian as "pusk". They offered to make their proposal on reformulation of this term in Russian by the forty-seventh session of the Working Party on Inland Water Transport.

10B-1.3 The wheelhouse shall be equipped with adjustable heating and ventilation systems. The wheelhouse darkening device shall not interfere with ventilation.

10B-1.4 The glazing used in wheelhouses shall display a light transmission of at least 75%.

10B-1.5 Under normal operating conditions, the sound-pressure level of the noise produced by the vessel shall not exceed 70 dB (A) at the helmsman's head position. However, the Administration may authorize a sound-pressure level of 75 dB (A) at the helmsman's head position for vessels not more than 30m in length, with the exception of pushers.

10B-1.6 Tell-tale lamps or any other equivalent device for monitoring the signal lights shall be installed in the wheelhouse unless that monitoring can be performed direct from the wheelhouse.

10B-2 UNOBSTRUCTED VIEW

10B-2.1 The view from the helmsman's station ^{4/} shall be sufficiently unobstructed in all directions.

10B-2.2 A sufficiently unobstructed view in all directions from the helmsman's station ^{5/} shall be deemed to be provided if the following conditions are met:

- (i) The unobstructed field of view from the helmsman's position shall cover at least 240° of the horizon, including at least 140° in the forward half-circle;
- (ii) No window frames, posts, etc. shall be placed in the helmsman's normal line of vision;
- (iii) The view through the windows in the helmsman's normal line of vision shall be kept clear under all weather conditions (rain, snow, frost) by suitable devices;
- (iv) If, in spite of the field of view of 240° or more, the sufficiently unobstructed view cannot be ensured astern, the competent authority on the inspection of vessels may require other measures to be taken, such as the installation of auxiliary optical devices.

10B-2.3 The dead area of vision forward of the bow of the unloaded vessel shall not extend beyond 250 m. The use of optical devices to reduce the dead area shall be left out of consideration for the purposes of this requirement.

^{4/} Note by the secretariat: See footnote 1 above.

^{5/} Note by the secretariat: See footnote 1 above.

10B-3 REQUIREMENTS CONCERNING CONTROL, DISPLAY AND MONITORING EQUIPMENT

10B-3.1 The controls shall move easily into the operating position, which shall be unmistakably clear.

10B-3.2 Monitoring instruments shall be easy to read whatever the lighting conditions inside the wheelhouse. Their illumination shall be capable of continuous adjustment to the point of extinction, so that the illumination is not dazzling and at the same time there is no impairment of visibility.

10B-3.3 There shall be a system for testing the warning lights.

10B-3.4 It shall be possible clearly to establish whether a system is in operation. If its functioning is indicated by means of a warning light the latter shall be green.

10B-3.5 Any malfunctioning or failure of systems that require monitoring shall be indicated by means of red warning lights.

10B-3.6 An audible warning shall sound at the same time that the red warning lights light up. The audible warnings may consist of a single, common signal. The sound pressure level of that signal shall exceed the maximum sound pressure level of the ambient noise at the steering position^{6/} by at least 3 dB(A).

10B-3.7 The audible warning system may be switched off after the malfunction or failure has been confirmed. That shutdown shall not prevent the alarm signal from being triggered by other malfunctions. The red warning lights shall only go out when the malfunction has been corrected.

10B-3.8 The monitoring and display devices shall be automatically connected to an alternative power supply if the main power supply fails.

10B-3.9 Devices for the remote control of the steering gear as a whole shall be installed permanently and so that the heading selected is clearly visible. If the remote control devices can be disengaged, they shall be fitted with an indicator showing whether the device is "in use" or "not in use". The arrangement and the manipulation of the controls shall be functional. Impermanent remote-control equipment for systems that are subsidiary to the steering system, such as active bow thrusters^{7/}, shall be acceptable provided that such a subsidiary installation can be activated by means of an override at any time within the wheelhouse.

^{6/} Note by the secretariat: See footnote 1 above.

^{7/} Note by the secretariat: It is suggested to translate the term "bouteurs actifs" as "active bow rudders" in English and "aktivnye nosovye ruli" in Russian.

10B-4 RADAR EQUIPMENT AND RATE-OF-TURN CONTROL

10B-4.1 The radar equipment and rate-of-turn indicators must be of types that have been approved by the competent authorities. The requirements of the competent authority concerning installation and operational monitoring shall be met.

10B-4.2 The radar indicator must be located in such a way as to permit the boatmaster to monitor the situation around the vessel on the indicator and to control the vessel from his post. The distance from the vessel's steering station ^{8/} to the radar indicator shall not exceed 800 mm.

10B-4.3 Cordless remote control panels for radar equipment are not permitted.

10B-4.4 The radar equipment must have a built-in operational monitoring feature permitting the boatmaster to check variations in operating parameters and to set the instrument correctly when radar targets are unavailable.

10B-4.5 The image on the radar indicator must be clearly visible irrespective of the lighting conditions in the wheelhouse. The illumination of the controls and the indicator should not be so intense as to dazzle the boatmaster when he is operating the vessel.

10B-4.6 The radar antenna must be installed so as to ensure that there is the best possible coverage on the indicator screen along the vessel's course, with no dead sectors within 5° to port or starboard, and that the coverage of the horizon is, if possible, unobstructed by superstructure, piping or other structures.

10B-4.7 The antenna must be installed sufficiently high up to ensure that the high-frequency radiation flux density on open decks where there may be people does not exceed the permitted level.

10B-4.8 Onboard radar equipment must be electrically operated from the main and emergency power supplies.

10B-4.9 The rate-of-turn indicator must be located ahead of the helmsman and within his field of vision, and as close as possible to the screen of the radar equipment.

10B-4.10 Where rate-of-turn regulators are used, it shall be possible to release the rate-of-turn control in any position without any change occurring in the selected rate. The sector through which the control rotates shall be large enough to ensure that it can be positioned with sufficient accuracy. The neutral position shall be perceptibly distinguishable from the other positions. Illumination of the scale shall be continuously adjustable.

10B-4.11 Departures from or additions to the requirements listed above shall be permitted on condition that all departures and additions are validated by the establishment of better working conditions for boatmasters or the improvement of the operating and technical specifications of radar equipment.

^{8/} Note by the secretariat: The term "vessel's steering station" should be brought in line with the one to be used in 7-3.3 above and elsewhere in this chapter.

10B-5 ALARM SYSTEM

10B-5.1 The helmsman must have within reach an on/off switch controlling the alarm signal; switches which automatically return to the off position when released are not acceptable.

10B-5.2 There shall be a general alarm system as well as an independent alarm system enabling to reach open decks; accommodation spaces; engine rooms; pump rooms, where appropriate, and other service premises.

10B-5.3 The sound pressure level for the alarm signal shall be at least 75 dB(A) within the accommodation area. In the engine rooms and pump rooms the alarm signal shall take the form of a flashing light that is visible on all sides and clearly perceptible at all points.

CHAPTER 14

PUSHERS, ^{2/} PUSHED BARGES AND PUSHED AND TOWED CONVOYS

14-1 PUSHERS

14-1.1 Pushers shall have at the bow a suitable pushing device so designed and equipped that, from the start of the coupling manoeuvres:

- (i) the pusher can take up a fixed position in relation to the pushed barges;
- (ii) the crew can perform easily and safely the manoeuvres required for coupling the pusher to the barges.

14-1.2 Pushers shall be equipped with at least two special winches or equivalent coupling devices, which shall satisfy the following requirements:

- (i) all components of the coupling device shall be capable of withstanding the maximum operational stresses imposed under the severest conditions to be encountered in the navigation zone for which the vessel is intended;
- (ii) the coupling devices shall ensure the rigid coupling with the pushed vessel or vessels; where convoys consist of a pusher vessel and a single pushed vessel, the coupling devices may permit controlled articulation. The control systems required for this purpose shall easily absorb the forces to be transmitted and shall be capable of being controlled easily and safely. Sections 10A-2 to 10A-4 shall apply by analogy to such control systems;
- (iii) it shall be possible to couple the pusher to both loaded and empty barges;
- (iv) the coupling device shall be so positioned on deck as not to interfere with the operation of other deck mechanisms, and the parts of the coupling device shall not project beyond the vessel's breadth over-all.

^{2/} In the present chapter the term «pusher» is applied also to self-propelled barges built to propel a pushed convoy or a vessel.

14-1.3 Vessels intended to propel side-by-side formations shall be equipped with bollards or equivalent devices the number and arrangement of which permit the formation to be securely linked.

14-2 PUSHED BARGES

14-2.1 Chapter 5, section 7-3, chapters 10A, 10B, X and 17 shall not apply to pushed barges with no steering system, accommodation, engine room or boilers.

14-2.2 Ships' lighters having a length L of 40 m or less shall in addition meet the following construction requirements:

- (i) The watertight transverse bulkheads referred to in paragraph 4-2.1 shall not be required if the forward side is capable of bearing a load at least 2.5 times that stipulated for the collision bulkhead of an inland waterway vessel with the same draught, built to the requirements of a recognized classification society;
- (ii) Notwithstanding paragraph 5-6.1, double-bottomed compartments to which access is difficult only have to be drainable if their volume exceeds 5% of the water displacement of the ships' lighter at the maximum authorized loaded draught.

14-2.3 Vessels intended for use in convoys shall be equipped with coupling devices, bollards or equivalent devices, the number and arrangement of which permit a secure link with other vessels or vessels of the convoy. ^{10/}

14-3 TOWING VESSELS

14-3.1 Vessels to be used for towing operations shall meet the following requirements:

- (i) Towing equipment shall be arranged in such a way that its use does not impair the safety of the vessel, crew or the cargo.
- (ii) Vessels to be used for auxiliary or main towing shall be equipped with towing devices: a towing winch or a tow hook which shall be capable of slipping, for the towing winch, or safe release, for the tow hook, from the steering position ^{11/}.
- (iii) The towing devices shall be installed forward of the propeller plane. That requirement shall not apply to vessels steered by cycloidal propellers or similar propulsion units.
- (iv) Notwithstanding the requirements of (ii) above, in the case of vessels to be used solely for auxiliary towing, other towing devices such as a bollard, to be installed forward of the propeller plane, may be used.

^{10/} The Administration or the competent authority for the waterway may prescribe a minimum speed for particular sectors of the waterway.

^{11/} Note by the secretariat: See footnote 1 above.

14-3.2 The Basin Administration may limit the length of the vessel to be used for downstream towing.

14-4 TESTS ON CONVOYS OF VESSELS

14-4.1 In order to issue the certificate of fitness of a pusher or a self-propelled barge capable of propelling a rigid convoy, and to enter relevant particulars in the certificate, the competent authority shall decide whether and which convoys are to be presented to it for inspection and shall carry out the navigation tests referred to in section X-2 with the convoy in the requested formation(s), which it considers to be least favourable. The convoy must meet the requirements set out in sections X-2 to X-10.

The competent authority shall check that the rigid coupling of all the vessels in the convoy is assured during the manoeuvres prescribed in chapter X.

14-4.2 If, in the course of the tests referred to in section 14-4.1 above, special equipment installed on vessels that are being pushed or led side-by-side is used, such as propelling or manoeuvring installations or articulated couplings, in order to meet the requirements of sections X-2 to X-10, the following shall be mentioned in the certificate of the vessels propelling the convoy: the formation, its position, the name and official number of the vessels making part of the convoy and fitted with the special equipment used.

14-5 ENTRIES ON THE CERTIFICATE

14-5.1 If a vessel is intended to push a convoy, or to be pushed in a convoy, the certificate shall mention its compliance with the applicable requirements of sections 14-1 to 14-4 above.

14-5.2 The following particulars shall be entered in the certificate of the vessel intended to ensure propulsion of another vessel or a convoy:

- (i) the convoys and formations permitted;
 - (ii) types of coupling;
 - (iii) maximum coupling forces transmitted and,
 - (iv) where appropriate, minimum tensile strength of the coupling cables for the longitudinal connection and the number of turns of the cable on the bollard.
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