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Inland Transport Committee

Working Party on Inland Water Transport

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

Sixty-fifth session

Geneva, 19–21 June 2024

Item 11 (c) of the provisional agenda

Recreational Navigation: International Certificate (International Card) for Pleasure Craft (Resolution No. 13)

Revision of the International Certificate (International Card) for Pleasure Craft (Resolution No. 13, Revised)

Note by the secretariat

Mandate

1. This document is submitted in line with the proposed Programme Budget for 2024, part V, Regional cooperation for development, section 20, Economic Development in Europe, Programme 17, Economic Development in Europe (A/78/6 (Sect. 20), table 20.5).
2. At its sixty-seventh session, the Working Party on Inland Water Transport (SC.3) exchanged opinions on the revision of resolution No. 13 based on the proposal prepared by the secretariat in ECE/TRANS/SC.3/2023/15 and asked the secretariat to continue this work in 2024 (ECE/TRANS/SC.3/220, paragraph 75). SC.3 mentioned that annex I of resolution No. 13, revised, referred to the Guidelines for Determining the Maximum Number of Persons for Which Pleasure Craft Are Suited for calculating the maximum number of persons allowed onboard (TRANS/SC.3/GE.1/46, annex 2).
3. The Guidelines, prepared by the Group of Experts on the Standardization of Technical Requirements for Vessels and of Ship's Papers and finalized at its twenty-fourth session on 27–30 August 1984, were approved by SC.3 at its twenty-eighth session on 9 November 1984. The text of the Guidelines, as contained in annex 2 of TRANS/SC.3/GE.1/46, is reproduced in the annex.

Annex

Guidelines for Determining the Maximum Number of Persons for Which Pleasure Craft Are Suited

CHAPTER 1 GENERAL PROVISIONS

1-1 PURPOSE AND SCOPE

1-1.1. The purpose of this text is to define criteria which can be used as guidelines to determine the maximum number of persons to be carried on board pleasure craft; it does not cover any other safety aspects such as stability and strength in general.

1-1.2. These guidelines apply only to pleasure craft of a length not exceeding 15 m, excluding special craft such as hydrofoil craft and air-cushion vehicles, and relate to navigation in zones 2 and 3 as defined in the Recommendations on Technical Requirements for Inland Navigation Vessels (annex to resolution No. 17, revised) (document TRANS/SC.3/104).

1-1.3. They do not apply to craft when used for special purposes such as competition.

1-2 DEFINITIONS AND USE OF TERMS

For the purposes of this document, the following terms and definitions are used:

1-2.1. Pleasure craft: a craft used exclusively for recreation and sport, and referred to in the text which follows as a “craft”.

1-2.1.1. Motor craft: a craft designed primarily for propulsion by an engine. If there are sails, they shall constitute only an auxiliary propulsion device; the area of the sails shall not materially affect the stability of the craft, and their positioning shall not be such as to hamper the persons on board.

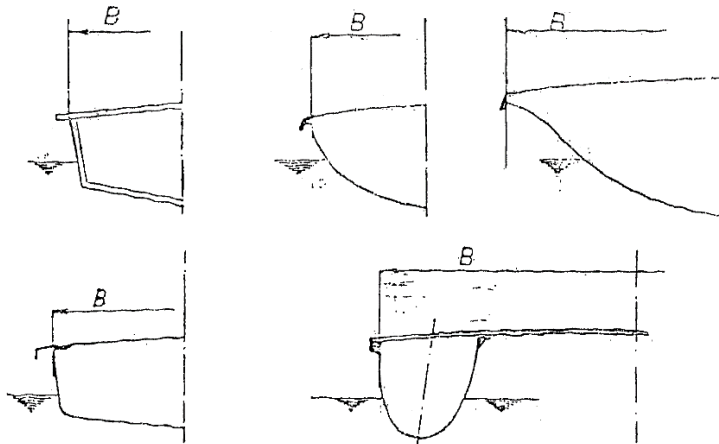
1-2.1.2. Sailing craft: a craft designed primarily for propulsion by means of sails. If such a craft is fitted with an auxiliary engine, its power and position shall not be such as to affect its characteristics and essential functions as a sailing craft.

1-2.2. Dimensions of the craft:

1-2.2.1. Length: The length (L) of a craft is the maximum length of the hull measured in metres, excluding the rudder and the bowsprit.

1-2.2.2. Breadth: The breadth (B) of a craft is the maximum width of the hull measured in metres on the outside of the shell planking or plating, disregarding attachments (fenders, deck edge extending beyond the shell planking or plating, etc.) (see figure 1-2.2.2.). For craft with unconventional hull forms (multi-hulls, etc.), the breadth is the maximum width of the craft as a whole measured on the outside of the shell planking or plating of the most widely separated hulls providing buoyancy to the craft in the upright position.

Figure 1-2.2.2



1-2.3. Mass of a person: The mass of a person is taken to be 75 kg.

1-2.4. Swamped: a craft is considered to be swamped when it is impossible for any water to enter the hull without overflowing and there are no air pockets within the hull.

1-3 GENERAL

1-3.1. The maximum number of persons on board the craft is determined in relation to:

- (a) Accommodation and distribution of seats;
- (b) Watertightness of the hull;
- (c) Buoyancy when swamped;
- (d) Stability when intact;
- (e) Stability when swamped.

1-3.2. The strength of the craft's hull shall be sufficient for the maximum number of persons to be taken on board.

1-3.3. The maximum number of persons on board a craft is the least number obtained by using the various criteria.

CHAPTER 2 PRINCIPAL CRITERIA

2-1 MOTOR CRAFT

2-1.1. The maximum number of persons on board a motor craft with a single hull form shall generally not exceed the value obtained by means of the formula

$$n_{max} = 2L \times B \times (D_{SWL} - d)$$

For a craft of unconventional hull form (multi-hulls etc.) and in cases where the data of the volume are available, the maximum number of persons on board may be obtained by means of the formula

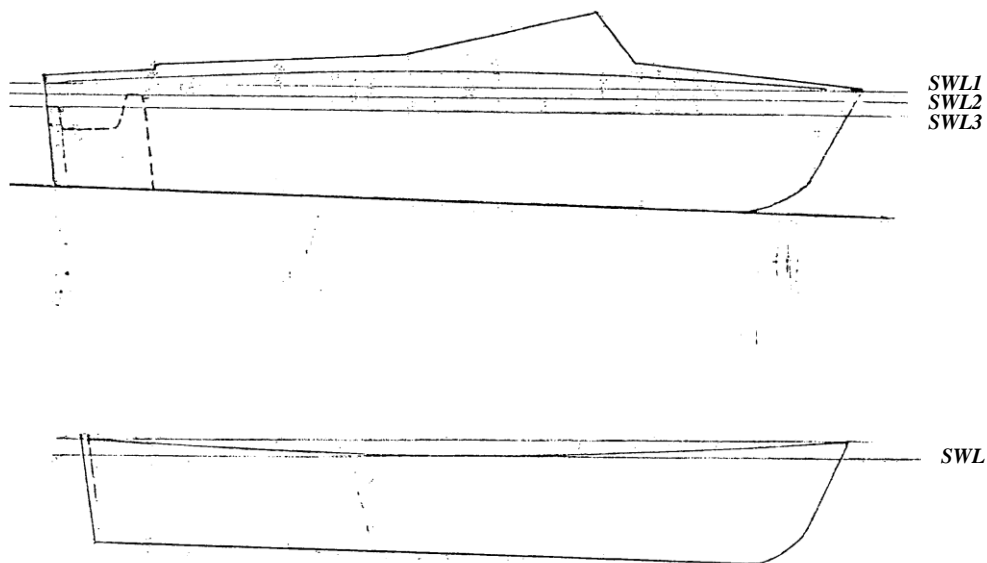
$$n_{max} = 2.667(\Delta_{SWL} - \Delta_G),$$

where:

- n_{max} = maximum number of persons on board rounded to the nearest whole number according to the usual rules;
- D_{SWL} (m) - depth at the mid-point of the length (L) of the craft measured from its lowest point to the theoretical static waterline (SWL);
- d (m) - draught, with full equipment but without persons on board, at the mid-point of the length (L) of the craft measured from its lowest point to the waterline of the craft;

- Δ_{SWL} (m³) - volume of water displaced by the hull when immersed up to the *SWL*;
- Δ_G (m³) - volume of water displaced by the hull with permanently fixed equipment (including the engines and full fuel tanks);
- SWL*₁ - static waterline where the hull has no opening in the transom below the deck line;
- SWL*₂ - static waterline where the hull has an opening in the transom and an engine-well;
- SWL*₃ - static waterline where the transom has an opening but there is no engine-well (see figure 2-1.1).

Figure 2-1.1



Notes

1. The theoretical static waterline (*SWL*) is the plane perpendicular to the plane of longitudinal symmetry and parallel to the straight line drawn between the outer points of the intersections of the stern and transom with the deck line and passing through the lowest point of the hull above which the hull is not considered to be watertight. This plane may not lie above the deck line.
 2. The volume (m³) of the engine-well, if any, and the volume of permanently fixed equipment shall be deducted from the value ($\Delta_{SWL} - \Delta_G$).
- 2-1.2. Sufficient space must be provided for the accommodation of the maximum number of persons on board. A free horizontal area, including seating, of not less than 0.7 m² and a seating width of not less than 0.45 m must be provided for each person.
- 2-1.3. One or more openings below the *SWL* are permitted in the partition forming the engine-well to admit the engine controls. Their total cross-sectional area shall not exceed 45 cm².

2-2 SAILING CRAFT

2-2.1. The maximum number of persons taken on board a sailing craft is obtained from the formulae below, account being taken of the length *L* and the product *L*×*B* of the craft. The number *n* so obtained shall be rounded off to the nearest whole number according to the usual rules.

Where *L* is less than or equal to 7.6 m or *L*×*B* less than or equal to 17 m²:

$$n = 0.714L$$

Where *L* is greater than 7.6 m or *L*×*B* greater than 17 m²:

$$n = 0.20(L \times B + 10).$$

2-2.2. The maximum number of persons shall be such that the handling of the sails is not hindered.

CHAPTER 3 ADDITIONAL CRITERIA

3-1 WATERTIGHTNESS OF THE HULL

3-1.1. The hull shall be watertight below the broken line shown in figures 3-1.2(a) and 3-1.2(b). The values for f and f_f as measured from the plane of the waterline of a craft carrying full equipment and the maximum number of persons shall not be less than the values determined according to the formulae in 3-1.2 and 3-1.3. Exceptions may be made in accordance with article 3-2.

3-1.2. The value f shall be determined in relation to the navigation zone and the length (L) of the craft.

For zone 2, the value shall be not less than:

$$f = 0.067L$$

but it shall not be less than 0.2 m and need not be more than 1.0 m.

For zone 3, the value f shall be not less than:

$$f = 0.025L + 0.125$$

but it shall not be less than 0.2 m and need not be more than 0.5 m.

3-1.3. For craft navigating in zone 2, the value f_f shall be not less than:

$$f_f = 0.1L$$

but need not be greater than 1.0 m.

For craft navigating in zone 3, the value f_f shall be not less than:

$$f_f = 0.07L$$

but need not be greater than 0.5 m.

3-1.4. If the forward extremity of a craft is covered by a watertight deck, the value f_f need not be taken into account, provided the open parts of the hull at the bow end are protected by an efficient breakwater. There shall be no apertures open to the inside of the shell planking or plating below the line formed by the values of f and f_f ; apertures shall either be fitted with watertight closures (drain valves, viewing ports, etc.) or be connected to pipes of on-board systems (filling, exhaust and other orifices) which do not communicate with the interior of the craft.

3-2 BUOYANCY WHEN SWAMPED

3-2.1. The following craft shall remain afloat when they are completely swamped:

- (a) Craft of a length not exceeding 5.5 m;
- (b) Craft which do not meet the requirements of paragraphs 3-1.1 to 3-1.4.

3-2.2 For consideration when swamped, the craft shall be completely equipped. When completely swamped, the craft shall be able to support a load equal to at least 15 kg for each person on board and remain in a trim approximating to that of floating on even keel.

Figure 3-1.2(a)

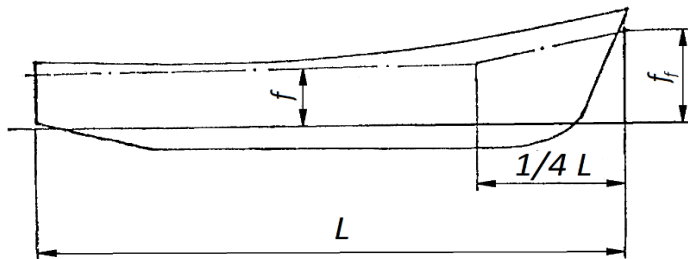
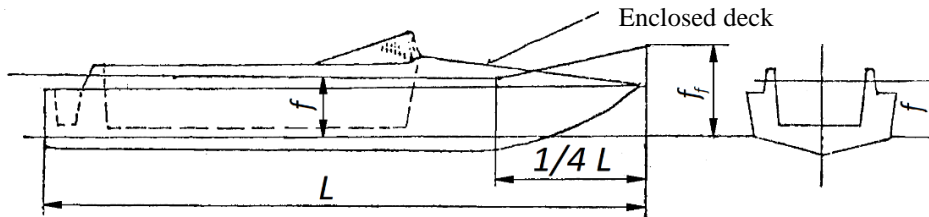


Figure 3-1.2(b)



3-3 STABILITY WHEN INTACT

3-3.1. The stability of the craft shall be in conformity with the following provisions:

Under the effect of the heeling moment M_{heel} (kg·m):

- (a) The craft shall not heel up to the point at which swamping of the hull begins;
- (b) The angle of heel shall not exceed 30°.

Craft with full equipment but without persons on board:

$$M_{heel} = 75(0,5B - 0.2)$$

Craft with full equipment and full complement of persons on board:

$$M_{heel} = K \times P \times (0.5B - 0.2)$$

Where

- $K = 0.6$ coefficient for open craft and craft having a cabin or closed superstructure of a total volume not exceeding 15 m³;
- $K = 1$ coefficient for craft having a superstructure or closed cabin of a total volume of more than 15 m³;
- P (kg) - value equal to the mass of the maximum number of persons on board.

3-3.2. The stability criteria set out in 3-3.1 should be confirmed by calculation or stability tests.

The test weights shall be so placed that their centre of gravity is 0.3 m above the deck for decked craft or above the seats for undecked craft.

In the case of a craft having its full load in equipment and persons and having a coefficient K equal to 0.6, corresponding to 60 per cent of the mass P , the remaining 40 per cent of the load shall be distributed on the longitudinal centre plane.

3-4 STABILITY WHEN SWAMPED

Craft to which the provisions of 3-2 are applicable shall remain stable when swamped under the effect of a heeling moment (kg·m) equal to:

$$M_{heel} \text{ (kg} \times \text{m)} = (10 + 5n) \times 0.5B$$

where n is the maximum number of persons on board.