



TM/CONF/C.2/WP.42  
12 June 1969

Original: ENGLISH

## IMCO

### INTERNATIONAL CONFERENCE ON TONNAGE MEASUREMENT, 1969

#### Technical Committee

### THIRD DRAFT OF REGULATIONS FOR DETERMINING GROSS AND NET TONNAGES OF SHIPS

#### Regulation 1

##### General

- (1) The tonnage of a ship shall consist of gross tonnage and net tonnage.
- (2) The gross and net tonnages shall be determined in accordance with the provisions of these Regulations.
- (3) The gross and net tonnages of novel types of craft whose constructional features are such as to render the application of the provisions of these Regulations unreasonable or impracticable shall be as determined by the Administration. Where the tonnage is so determined, the Administration shall communicate to the Organization details of the method used for that purpose, for circulation to the Contracting Governments for their information.

TM/CONF/C.2/WP.42

Regulation 2

Definitions of Terms used in the Annexes to the Convention

(1) Upper Deck

The upper deck is the uppermost complete deck exposed to weather and sea, which has permanent weathertight means of closing all openings in the weather part thereof, and below which all openings in the sides of the ship are fitted with permanent means of watertight closing. In a ship having a discontinuous upper deck, the lowest line of the exposed deck and the continuation of that line parallel to the upper part of the deck is taken as the upper deck.

(2) Moulded depth

- (a) The moulded depth is the vertical distance measured from the top of the keel to the underside of the upper deck at side. In wood and composite ships the distance is measured from the lower edge of the keel rabbet. Where the form at the lower part of the midship section is of a hollow character, or where thick garboards are fitted, the distance is measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel.
- (b) In ships having rounded gunwales, the moulded depth shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwale were of angular design.
- (c) Where the upper deck is stepped and the raised part of the deck extends over the point at which the moulded depth is to be determined, the moulded depth shall be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part.

(3) Enclosed Spaces

(a) Enclosed spaces are all those spaces which are separated off by the ship's hull, by decks or coverings other than permanent or movable awnings, or by fixed or portable partitions. No break in a deck, nor any opening or openings in the ship's hull, a deck or a covering of a space or in the partitions or bulkheads of a space, nor the absence of a partition shall prevent a space from being measured and included in the enclosed space.

(b) Subject to the provisions of sub-paragraph (a) of this paragraph, the following spaces shall not be considered as enclosed spaces and shall not therefore be included in the volume of enclosed spaces, unless they are provided with shelves or other means for securing cargo or stores, and openings are not fitted with any means of closing and the construction does not provide a possibility of closing.

(i) (1) A space within an erection opposite an end opening from deck to deck except for a curtain plate of a depth not exceeding by more than 25 millimetres (one inch) the depth of the adjoining deck beams and which opening has a breadth equal to or greater than 90 per cent the breadth of the deck at the line of the opening of the space (see Figure ...).

TM/CONF/C.2/WP.42

This provision shall be so applied so as to exclude from the enclosed spaces only the space between the actual end opening and a line drawn parallel to the line or face of the opening at a distance from the opening equal to one-half the width of the deck at the line of the opening (see Figure ...).

- (i) (2) Should the open space because of any arrangement except by convergence of the outside plating, become of less width than 90 per cent the breadth of the deck, then only the space between the line of the opening and a parallel line drawn through the point where the athwartships width of the open space become equal to, or less than, 90 per cent the breadth of the deck shall be excluded from the volume of enclosed spaces (see Figure ...).
- (i) (3) Where an interval, which is completely open other than by bulwarks or open rails, separates any two spaces, the exclusion of one or both of which is permitted under sub-paragraph (i)(1) and (2) of this paragraph such exclusion shall not apply if the separation between them is less than the least half breadth of the deck in way of the separation (see Figure ...).



- (ii) A space under an overhead deck covering open to the sea and weather, having no other connexion on the exposed sides with the body of the ship than the stanchions necessary for their support; open rails or a bulwark and curtain plate may be fitted or stanchions fitted at the ship's side, provided that the open space between the top of the rails or the bulwark and the curtain plate is not less than 0.75 metres (2.5 feet) or one-third the height of the space, whichever is the greater (see Figure ...).
- (iii) A space in a side-to-side erection directly in way of opposite side openings not less in height than 0.75 metres (2.5 feet) or one-third the height of the erection whichever is the greater; if the opening is provided on one side only the space excluded from the volume of enclosed spaces shall be limited inboard from the opening to a maximum of one-half the breadth of the deck in way of the opening (see Figure ...).
- (iv) A space in an erection immediately below an uncovered opening in the deck overhead, provided that such an opening is exposed to the weather and the space excluded from enclosed spaces is limited to the area of the opening (see Figure ...).

TM/CONF/C.2/WP.42

- (v) A recess in the boundary bulkhead of an erection which is exposed to the weather and the opening of which extends from deck to deck without means of closing, provided that the interior width is not greater than the width at the entrance and its extension into the erection is not greater than twice the width of its entrance (see Figure ...).

(4) Passenger

A passenger is every person other than:

- (i) the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and  
(ii) a child under one year of age.

(5) Cargo Spaces

Cargo Spaces are spaces appropriated for the transport of cargo which is to be discharged from the ship, provided that such spaces are included in the computation of gross tonnage. Cargo spaces shall be certified by permanent marking.

Regulation 3

Gross Tonnage

The gross tonnage of a ship GT in register tons shall be determined by the following formula:

$$GT = K_1 V$$

where: V = Total volume of all enclosed spaces  
of the ship in cubic metres (cubic feet),

$$K_1 = 0.2 + 0.02 \log_{10} V \text{ (when V in cubic metres),}$$

or

$$A + B \log_{10} V \text{ (when V in cubic feet).}$$

Regulation 4

Net Tonnage

- (1) The net tonnage of a ship NT in register tons shall be determined by either of the following formulae, whichever is the greater:

$$NT = K_2 V_c \left( \frac{4d}{3D} \right)^3 + K_3 \left( N_1 + \left\lfloor \frac{N_2}{6} \right\rfloor + \frac{N_3}{10} \right)$$

or

$$NT = \left\lfloor 0.25 \right\rfloor GT + K_3 \left( N_1 + \left\lfloor \frac{N_2}{6} \right\rfloor + \frac{N_3}{10} \right)$$

where:  $K_2$  = ..... (in metric system),

or

= ..... (in British system),

$V_c$  = total volume of cargo spaces in cubic metres (cubic feet),

$d$  = moulded draught of the ship in metres (feet) as defined in paragraph (2) of this Regulation,

$D$  = moulded depth of the ship amidships as defined in Regulation 2(2) in metres (feet),

$K_3$  = ..... (in metric units),

or

= ..... (in British units),

$N_1$  = total number of passengers other than passengers in dormitories with more than eight berths in each cabin and other than passengers without berths,

$\left\lfloor N_2 \right\rfloor$  = total number of passengers the ship is permitted to carry in dormitories with more than eight berths in each dormitory 7,

TM/CONF/C.2/WP.42

$N_3$  = total number of passengers without berths,

$N_1 + N_2 + N_3$  = total number of passengers the ship is permitted to carry as indicated in the ship's certificate,

GT = gross tonnage of the ship in register tons as determined from Regulation 3.

- (2) The moulded draught of the ship referred to in paragraph (1) of this Regulation shall be one of the following draughts:
- (i) for ships to which the International Convention on Load Lines in force applies, the draught corresponding to the summer load line other than timber load line assigned in accordance with that Convention;
  - (ii) for passenger ships, the draught corresponding to the deepest subdivision load line assigned in accordance with the International Convention for the Safety of Life at Sea in force or other international agreement where applicable;
  - (iii) for ships to which the International Convention on Load Lines does not apply but which have been assigned a load line in compliance with national requirements, the draught corresponding to the summer load line so assigned;
  - (iv) for ships to which no load line is assigned but the draught of which is restricted in compliance with national requirements, the maximum permitted draught so required; or
  - (v) for other ships, the draught equal to 75 per cent of the moulded depth amidships to the upper deck.



Regulation 5

Change of Net Tonnage

- (1) When the characteristics of a ship, such as  $\nabla$ ,  $V_c$ ,  $d$ ,  $N_1$ ,  $N_2$  or  $N_3$  as defined in Regulations 3 and 4, are altered and where such an alteration results in an increase in its net tonnage as determined in accordance with the provisions of Regulation 4, the net tonnage of the ship corresponding to the new characteristics shall be determined and shall be applied forthwith.
- (2) A ship to which load lines referred to in sub-paragraphs (2)(i) and (ii) of Regulation 4, are concurrently assigned shall be given only one net tonnage as determined in accordance with the provisions of Regulation 4 and that tonnage shall be the tonnage applicable to the appropriate assigned load line for the trade in which the ship is engaged.
- (3) When the characteristics of a ship such as  $\nabla$ ,  $V_c$ ,  $d$ ,  $N_1$ ,  $N_2$  or  $N_3$  as defined in Regulations 3 and 4 are altered or when the appropriate assigned load line referred to in paragraph (2) of this Regulation is altered due to the change of the trade in which the ship is engaged, and where such an alteration results in a decrease in its net tonnage as determined in accordance with the provisions of Regulation 4, a new International Tonnage Certificate (1969) shall be issued, but the value of the net tonnage shown in that Certificate shall be the same as that shown in the current Certificate until twelve months have elapsed from the date on which the current Certificate was issued; provided that this requirement shall not apply:
  - (i) if the ship is transferred to the flag of another State, or

TM/CONF/C.2/WP.42

- (ii) if a real change in the ownership of the ship takes place, or
- (iii) if the ship undergoes alterations or modifications which are deemed by the Administration to be of a major character, such as removal of a superstructure which requires an alteration of the assigned load line, or
- (iv) to passenger ships which are employed in the carriage of large numbers of unberthed passengers in special trades, such, for example, as the pilgrim trade

#### Regulation 6

##### Calculation of volumes and displacement

- (1) All volumes and displacement included in the calculation of gross and net tonnages shall be measured, irrespective of the fitting of insulation or the like, to the inner side of the shell or structural boundary plating in ships constructed of metal, and the outer surface of the shell or boundary to the inner side of structural boundary surfaces in ships constructed of any other material.
- (2) Volumes of appendages shall be included in the total volume and displacement.
- (3) Volumes of spaces open to the sea may be excluded from the total volume and displacement.

Regulation 7

Measurement and Calculation

- (1) All measurement used in the calculation of volumes and displacement shall be taken to the nearest centimetre (one-twentieth of a foot).
  - (2) The volumes and displacement shall be calculated by methods generally accepted for this purpose and with an accuracy acceptable to the Administration.
  - (3) The calculation shall be sufficiently detailed to permit easy checking.
-