



IMCO

INTERNATIONAL CONFERENCE ON TONNAGE MEASUREMENT, 1969

Drafting Committee

AGREED TEXTS

1. Attached hereto is a draft text of Regulations of an International Convention on Tonnage Measurement of Ships, 1969 as agreed by the Drafting Committee.

2. In submitting this text, the Drafting Committee wish to draw the attention of the General Committee to the following points:-

Regulation 5 (Change of Net Tonnage)

Paragraph (3) of this Regulation, as drafted, provides that when an alteration in a ship results in a decrease in its net tonnage within 12 months of the date of the issue of its current International Tonnage Certificate, 1969, the following sequence of events will take place:-

- (a) A new Certificate will be issued which will include the same tonnages as those contained in the previous Certificate which should of course be withdrawn.
- (b) The second page of the new Certificate will include the latest information about the ship's reduced net tonnage but this will not correspond with the figure for net tonnage on the first page of the new Certificate.

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- (c) When a period of 12 months has elapsed from the date of the previous Certificate, the ship will be entitled to a further Certificate giving its actual net tonnage and, of course, its gross tonnage.
- (d) When this further Certificate is issued - and this could take place within a few months of the new Certificate referred to in (a) above - the latter Certificate would then be withdrawn.

International Tonnage Certificate, 1969

The text of model certificate as proposed by the Technical Committee (TM/CONF/C.2/WP.46) made provision on the first page for the insertion of the date on which the keel of the ship was laid or when the ship underwent alterations or modifications of a major character. The Drafting Committee was unable to discover the reason for which this information is required and amended the form accordingly.

Proposed Regulation about Penalties (TM/CONF/C.2/WP.41)

The Drafting Committee gave preliminary consideration to the draft text of this Regulation. Without attempting to anticipate the decision of the General Committee, the Drafting Committee foresaw considerable difficulty in drafting an Article which would be likely to be acceptable in a Convention of this kind. The Committee thought it would be possible to draft a Recommendation on this subject but considered that it would be preferable not to attempt to do so until the General Committee had considered the matter and given some general guidance thereon.

ANNEX I

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 tonnage and the net tonnage shall be determined in accordance with the provisions of these Regulations.
- (3) The gross tonnage and the net tonnage 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.

Regulation 2

Definitions of Terms used in the Annexes

(1) Upper Deck

The upper deck is the uppermost complete deck exposed to weather and sea, which has permanent means of weathertight closing of 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 stepped 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.

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(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 gunwales 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) Breadth

The breadth is the maximum breadth of the ship, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material.

(4) Enclosed Spaces

- (a) Enclosed spaces are all those spaces which are bounded by the ship's hull, by decks or coverings other than permanent or movable awnings, or by fixed or portable partitions or bulkheads. No break in a deck, nor any

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opening in the ship's hull, in a deck or in a covering of a space, or in the partitions or bulkheads or a space, nor the absence of a partition or bulkhead, shall preclude a space from being included in the enclosed space.

- (b) Notwithstanding the provisions of sub-paragraph (a) of this paragraph, the following spaces shall not be considered as enclosed in the volume of enclosed spaces, unless they are fitted with shelves or other means for securing cargo or stores, and provided that the openings are not fitted with any means of closure and that the construction does not provide the possibility of such openings being closed:

- (i) (1) A space within an erection opposite an end opening extending 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, such opening having a breadth equal to or greater than 90 per cent of the breadth of the deck at (Figures 1 in Appendix I).

This provision shall be 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 of the width of the deck at the line of the opening (Figure 1 in Appendix I).

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- (i) (2) Should the width of the space because of any arrangement except by convergence of the outside plating, become less than 90 per cent of 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 space becomes equal to, or less than, 90 per cent of the breadth of the deck shall be excluded from the volume of enclosed spaces (Figures 2, 3 and 4 in Appendix I).
- (i) (3) Where an interval which is completely open except for bulwarks or open rails separates any two spaces, the exclusion of one or both of which is permitted under sub-paragraphs (i)(1) and/or (2), such exclusion shall not apply if the separation between the two spaces is less than the least half breadth of the deck in way of the separation (Figures 5 and 6 in Appendix I).
- (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 its support. In such a space, 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 of the height of the space, whichever is the greater (Figure 7 in Appendix I).

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- (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 of the height of the erection, whichever is the greater. If the opening in such an erection is provided on one side only the space to be excluded from the volume of enclosed spaces shall be limited inboard from the opening to a maximum of one-half of the breadth of the deck in way of the opening (Figure 8 in Appendix I).
- (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 (Figure 9 in Appendix I).
- (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 (Figure 10 in Appendix I).

(5) 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.

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(6) Cargo Spaces

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

(7) Weathertight

Weathertight means that in any sea conditions water will not penetrate into the ship.

Regulation 3

Gross Tonnage

The gross tonnage (GT) of a ship 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,

$$K_1 = 0.2 + 0.02 \log_{10} V \text{ (or as tabulated in Appendix II)}$$

Regulation 4

Net tonnage

(1) The net tonnage (NT) of a ship shall be determined by the following formula:

$$NT = K_2 V_c \left(\frac{4d}{3D} \right)^2 + K_3 \left(N_1 + \frac{N_2}{10} \right)$$

In the above formula:

- (i) the factor $\left(\frac{4d}{3D} \right)^2$ shall not be taken as greater than unity;
- (ii) the term $K_2 V_c \left(\frac{4d}{3D} \right)^2$ shall not be taken as less than 0.25 GT; and
- (iii) NT shall not be taken as less than 0.30 GT,

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where: V_c = total volume of cargo spaces in cubic metres,
 K_2 = $0.2 + 0.02 \log_{10} V_c$ (as tabulated in Appendix II),
 K_3 = $1.25 \frac{GT + 10,000}{10,000}$
 D = moulded depth amidships in metres as defined in Regulation 2(2),
 d = moulded draught amidships in metres as defined in paragraph (2) of this Regulation,
 N_1 = number of passengers in cabins with not more than 8 berths,
 N_2 = number of other passengers,
 $N_1 + N_2$ = total number of passengers the ship is permitted to carry as indicated in the ship's passenger certificate; when $N_1 + N_2$ is less than 13, N_1 and N_2 shall be taken as zero,
 GT = gross tonnage of the ship as determined in accordance with the provisions of Regulation 3.

- (2) The moulded draught (d) 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 lines) 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;

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- (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 has been assigned but the draught of which is restricted in compliance with national requirements, the maximum permitted draught;
- (v) for other ships, 75 per cent of the moulded depth amidships as defined in Regulation 2(2).

Regulation 5

Change of Net Tonnage

- (1) When the characteristics of a ship, such as V , V_c , d , N_1 or N_2 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 without delay.
- (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 V , V_c , d , N_1 or N_2 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

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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 identical with that shown in the previous Certificate until twelve months have elapsed from the date on which the previous Certificate was issued; provided that this requirement shall not apply:

- (i) if the ship is transferred to the flag of another State, or
- (ii) if the ship undergoes alterations or modifications which are deemed by the Administration to be of a major character, such as the removal of a superstructure which requires an alteration of the assigned load line, or
- (iii) 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

- (1) All volumes 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 to the outer surface of the shell or to the inner side of structural boundary surfaces in ships constructed of any other material.

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- (2) Volumes of appendages shall be included in the total volume.
- (3) Volumes of spaces open to the sea may be excluded from the total volume.

Regulation 7

Measurement and Calculation

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

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APPENDIX 1

FIGURES REFERRED TO IN REGULATION 2(4)

In the following Figures:-

O = Excluded space

C = Enclosed space

I = Space to be considered as an enclosed space

Hatched-in parts to be included as enclosed spaces

B = Breadth of the deck in way of the opening.

In ships with rounded gunwales the breadth is measured as indicated in Figure 11.

APPENDIX 2

COEFFICIENTS K_1 AND K_2 REFERRED TO
IN REGULATIONS 3 AND 4(1)
 V or V_c = VOLUME IN CUBIC METRES

V or V_c	K_1 or K_2	V or V_c	K_1 or K_2	V or V_c	K_1 or K_2	V or V_c	K_1 or K_2
10	.2200	55.000	.2948	380.000	.3116	750.000	.3175
20	.2260	60.000	.2956	390.000	.3118	760.000	.3176
30	.2295	65.000	.2963	400.000	.3120	770.000	.3177
40	.2320	70.000	.2969	410.000	.3123	780.000	.3178
50	.2340	75.000	.2975	420.000	.3125	790.000	.3180
60	.2356	80.000	.2981	430.000	.3127	800.000	.3181
70	.2369	85.000	.2986	440.000	.3129	810.000	.3182
80	.2381	90.000	.2991	450.000	.3131	820.000	.3183
90	.2391	95.000	.2996	460.000	.3133	830.000	.3184
100	.2400	100.000	.3000	470.000	.3134	840.000	.3185
				480.000	.3136	850.000	.3186
				490.000	.3138	860.000	.3187
100	.2400	100.000	.3000	500.000	.3140	870.000	.3188
200	.2460	110.000	.3008	510.000	.3142	880.000	.3189
300	.2495	120.000	.3016	520.000	.3143	890.000	.3190
400	.2520	130.000	.3023	530.000	.3145	900.000	.3191
500	.2540	140.000	.3029	540.000	.3146	910.000	.3192
600	.2556	150.000	.3035	550.000	.3148	920.000	.3193
700	.2569	160.000	.3041	560.000	.3150	930.000	.3194
800	.2581	170.000	.3046	570.000	.3151	940.000	.3195
900	.2591	180.000	.3051	580.000	.3153	950.000	.3196
1000	.2600	190.000	.3056	590.000	.3154	960.000	.3196
1000	.2600	200.000	.3060	600.000	.3156	970.000	.3197
2000	.2660	210.000	.3064	610.000	.3157	980.000	.3198
3000	.2695	220.000	.3068	620.000	.3158	990.000	.3199
4000	.2720	230.000	.3072	630.000	.3160	1000.000	.3200
5000	.2740	240.000	.3076	640.000	.3161		
6000	.2756	250.000	.3080	650.000	.3163		
7000	.2769	260.000	.3083	660.000	.3164		
8000	.2781	270.000	.3086	670.000	.3165		
9000	.2791	280.000	.3089	680.000	.3166		
10000	.2800	290.000	.3092	690.000	.3168		
10000	.2800	300.000	.3095	700.000	.3169		
15000	.2835	310.000	.3098	710.000	.3170		
20000	.2860	320.000	.3101	720.000	.3171		
25000	.2880	330.000	.3104	730.000	.3173		
30000	.2895	340.000	.3106	740.000	.3174		
35000	.2909	350.000	.3109				
40000	.2920	360.000	.3111				
45000	.2931	370.000	.3114				
50000	.2940						

COEFFICIENTS K_1
OR K_2 AT
INTERMEDIATE
VALUES OF V OR
 V_c SHALL BE
OBTAINED BY
LINEAR
INTERPOLATION

ANNEX II
CERTIFICATE

INTERNATIONAL TONNAGE CERTIFICATE (1969)

(Official Seal)

Issued under the provisions of the International Convention on Tonnage Measurement of Ships, 1969 under the authority of the Government of

(full official designation of country)

for which the Convention came into force on 19..

by
(full official designation of the competent person or organization recognized under the provisions of the International Convention on Tonnage Measurement of Ships, 1969.)

Name of Ship	Distinctive Number or Letters	Port of Registry

MAIN DIMENSIONS

Length (Article 2(8))	Breadth (Regulation 2(3))	Moulded Depth amid- ships to Upper Deck (Regulation 2(2))

THE TONNAGES OF THE SHIP ARE:-

GROSS TONNAGE

NET TONNAGE

This is to certify that the tonnages of this ship have been determined in accordance with the provisions of the International Convention on Tonnage Measurement of Ships, 1969.

Issued at.....19..
(place of issue of certificate) (date of issue)

.....
(signature of official issuing the certificate)

and/or

(seal of issuing authority)

If signed, the following paragraph is to be added:

The undersigned declares that he is duly authorized by the said Government to issue this certificate.

.....
(Signature)

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SPACES INCLUDED IN TONNAGE					
GROSS TONNAGE			NET TONNAGE		
Name of Space	Location	Length	Name of Space	Location	Length
Underdeck	-	-			
			NUMBER OF PASSENGERS (Regulation 4(1)) Number of passengers in cabins with not more than 8 berths Number of other passengers		
EXCLUDED SPACES (Regulation 2(4)) An asterisk (*) should be added to those spaces listed above which comprise both enclosed and excluded spaces.			MOULDED DRAUGHT (Regulation 4(2))		
Date and place of original measurement					
Date and place of last previous remeasurement					
REMARKS:					