



# MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

**MARINECARE Consultant Bangladesh Ltd**

# **MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020**

## **TABLE OF CONTENTS**

### **PART I GENERAL**

1. Citation
2. Interpretation

### **PART II APPLICATION, ASCERTAINMENT OF TONNAGE AND CERTIFICATION FOR BANGLADESH SHIPS OF 24 METRES IN LENGTH AND OVER**

3. Application
4. Method of measurement
5. Calculation of volumes
6. Gross tonnage
7. Net tonnage
8. Segregated ballast oil tankers
9. Issue of certificates
10. Cancellation of certificates
11. Change of net tonnage necessitating issue of certificates
12. Use of gross tonnage ascertained under previous regulations

### **PART III APPLICATION, ASCERTAINMENT OF TONNAGE AND CERTIFICATION FOR BANGLADESH SHIPS OF LESS THAN 24 METRES IN LENGTH, OTHER THAN FISHING VESSELS**

13. Application
14. Measurement and certification

### **PART IV**

#### **NON-BANGLADESH SHIPS**

15. Ascertainment of tonnage and certification

### **PART V MISCELLANEOUS**

16. Penalties
17. Revocation

SCHEDULE 1 Coefficients K1 and K2 Referred to in Sections 6, 7 and 8

SCHEDULE 2 Excluded Spaces as Defined in Section 2

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

The Director General, with approval of the Government and after consulting the persons referred to in section 478 of the Merchant Shipping act 2020 and in exercise of the power conferred by sections ----- of that Act, makes the following Regulations:

### PART I

#### GENERAL

##### **Citation**

1 These Regulations may be cited as the Merchant Shipping (Tonnage) Regulations 2020.

##### **Interpretation**

2 In these Regulations –

"Act" means the Merchant Shipping Act 2020;

"Administration" means the Government of the state whose flag the ship is flying;

"amidships" means the mid-point of the length, except in the case of a ship of less than 24 metres in length when it means the mid-point of the length overall;

"breadth" means 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;

"break" means the space bounded longitudinally by a side to side upward step in the lowest line of the upper deck and another such step or the end of the ship, transversely by the sides of the ship and vertically by the higher part of the deck and the lowest line of the upper deck continued parallel thereto;

"cargo spaces" means enclosed spaces which are appropriated for the transport of cargo to be discharged from the ship;

"Certifying Authority" means the Director General of Shipping or any person authorized or recognized by the Director General for the purposes of these Regulations;

"Contracting Government" means the Government of a country which has accepted the Convention;

"Convention" means the International Convention on Tonnage Measurement of Ships, 1969;

"enclosed spaces" means all those spaces, other than excluded spaces, which are bounded by the ship's hull, by fixed or portable partitions or bulkheads or by decks or coverings other than permanent or moveable awnings: no break in a deck, nor any opening in the ship's hull, in a deck or in a covering of a space, or in the partitions or bulkheads of a space, nor the absence of a partition or bulkhead, shall preclude a space from being included in the enclosed spaces and, for the purposes of

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

this definition, "excluded spaces" mean, subject to paragraph (f), any of the spaces specified in paragraphs (a) to (e) –

(a) that part of an enclosed space within an erection opposite an end opening and extending from the opening to an athwartship line at a fore and aft distance from the opening equal to half the breadth of the deck at the line of the opening; such end opening shall have a breadth equal to or greater than 90 per cent of the breadth of the deck at the line of the opening and shall extend from deck to deck or to a curtain plate of a depth not exceeding by more than 25 millimetres the depth of the adjacent deck beams, as specified in Figure 1 of Schedule 1: provided that –

(i) where at any point the width of the enclosed space because of any arrangement except convergence of the outside plating, as specified in Figure 3 of Schedule 1, becomes less than 90 per cent of the breadth of the deck at the line of the opening, the excluded space shall extend only to an athwartship line intersecting that point, as specified in Figures 2 and 4 of Schedule 1;

(ii) where the opposite ends of two enclosed spaces are separated by a gap, which is completely open except for bulwarks or open rails and of fore and aft length less than half the least breadth of the deck at the gap, then no part of the enclosed spaces shall be excluded, as specified in Figures 5 and 6 of Schedule 1;

(b) a space under an overhead deck covering open to the sea and weather having no other connection 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 distance between the top of the rails or the bulwark and the curtain plate is not less than 0.75 metres or one-third of the height of the space, whichever is the greater, as specified in Figure 7 of Schedule 1;

(c) a space in a side-to-side erection between opposite side openings not less in height than 0.75 metres 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, as specified in Figure 8 of Schedule 1;

(d) a space in an erection immediately below an uncovered opening in the deck overhead, provided such an opening is exposed to the weather and the space excluded from enclosed spaces is limited to the area of the opening, as specified in Figure 9 of Schedule 1;

(e) 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, as specified in Figure 10 of Schedule 1;

(f) notwithstanding paragraphs (a) to (e), any space listed in those subsections

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

which fulfills at least one of the following conditions shall be treated as an enclosed space –

- (i) the space is fitted with shelves or other means for securing cargo or stores;
- (ii) the openings are fitted with any means of closure;
- (iii) the construction provides a possibility of such openings being closed;

"length" means the greater of the following distances –

- (a) the distance between the fore side of the stem and the axis of the rudder stock; or
- (b) 96 per cent of the distance between the fore side of the stem and the aft side of the stern,

the points and measurements being taken respectively at and along a waterline at 85 per cent of the least moulded depth of the ship: in the case of a ship having a rake of keel the waterline shall be parallel to the designed waterline;

"length overall" means the distance between the foreside of the foremost fixed permanent structure and the afterside of the aftermost fixed permanent structure; and "fixed permanent structure" includes any portion of the hull which is capable of being detached, but which is fixed in place during the normal operation of the vessel: it does not include functional arrangements such as safety rails, bowsprits, pulpits, stemhead fittings, rudders, steering gear, outdrives, outboard motors, propulsion machinery, diving platforms, boarding platforms, rubbing strips and fenders, other than where such functional arrangements are designed to replace any part of the hull that has been removed;

"moulded depth", and in the case of a ship of less than 24 metres "depth", means the vertical distance measured from the top of the keel of a metal ship, or in wood and composite ships from the lower edge of the keel rabbet, to the underside of the upper deck at side, or, in the case of a ship which is not fully decked, to the top of the upper strake or gunwale, provided that –

- (a) 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 the case of a glass reinforced plastic ship where no keel member is fitted and the keel is of open trough construction, the distance is measured from the top of the keel filling, if any, or the level at which the inside breadth of the trough is 100 millimetres, whichever gives the lesser depth;
- (c) in ships having rounded gunwales, the distance is 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; and
- (d) where the upper deck is stepped and the raised part of the deck extends over the point at which the moulded depth is measured, the distance is measured to a line of

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

reference extending from the lower part of the deck along a line parallel with the raised part; and for the purposes of this definition —

- (i) "upper deck" means 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; and
- (ii) "weathertight" means that in any sea conditions water will not penetrate the ship;

"moulded draught" means—

- (a) for ships assigned load lines in accordance with the Load Line Rules, the draught corresponding to the Summer Load Line (other than timber load lines);
- (b) for passenger ships, the draught corresponding to the deepest subdivision load line assigned in accordance with the Bangladesh Merchant Shipping (Passenger Ship Construction: Ships of Classes I, II and IIA) Regulations 1998;
- (c) for ships to which no load line has been assigned but the draught of which is restricted by the Director General, the maximum permitted draught; and
- (d) for other ships, 75 per cent of the moulded depth amidships;

"non-Bangladesh ship" means a ship which is not a Bangladesh ship within the meaning of section ----- of the Act;

"oil tanker" means a ship constructed or adapted to carry oil in bulk in its cargo spaces and includes combination carriers, any NLS tanker as defined in Annex II of the MARPOL Convention and any gas carrier as defined in regulation 3.20 of Chapter II-1 of SOLAS 74 (as amended) when carrying a cargo or part cargo of oil in bulk;

and for the purpose of this definition "combination carrier" means a ship designed to carry either oil or solid cargoes in bulk;

"passenger" means any person carried in a ship except—

- (a) a person employed or engaged in any capacity on board the ship on the business of the ship;
- (b) a person on board the ship either in pursuance of the obligation laid upon the master to carry shipwrecked, distressed or other persons or by reason of any circumstances that neither the master nor the owner nor the charterer (if any) could have prevented;
- (c) a child under one year of age;

"pleasure vessel" means—

- (a) a vessel which at the time it is being used is —
  - (i) in the case of a vessel wholly owned by an individual or individuals,

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

used only for the sport or pleasure of the owner or immediate family or friends of the owner; or in the case of a vessel owned by a body corporate, used only for sport or pleasure and on which the passengers are employees or officers of the body corporate, or their immediate family or friends; and

(ii) on a voyage or excursion which is one for which the owner does not receive money for or in connection with operating the vessel or carrying any person, other than as a contribution to the direct expenses of the operation of the vessel incurred during the voyage or excursion;

and no other payments are made by or on behalf of users of the vessels other than by the owner; or

(b) any vessel wholly owned by or on behalf of a members' club formed for the purpose of sport or pleasure which, at the time it is being used, is used only for the sport or pleasure of members of that club or their immediate family; and for the use of which any charges levied are paid into club funds and applied for the general use of the club; and no other payments are made by or on behalf of users of the vessel, other than by the owner;

and, for the purposes of this definition, "immediate family" means in relation to an individual, the husband or wife of the individual and a relative of the individual or the individual's husband or wife, and "relative" means brother, sister, ancestor or lineal descendant;

"similar stage of construction" means the stage at which—

- (a) construction identifiable with a specific ship begins; and
- (b) assembly of that ship has commenced comprising at least 50 tonnes or one per cent of the estimated mass of all structural material whichever is less;

"surveyor" means a surveyor authorized or recognized by the Certifying Authority.

## PART II

### APPLICATION, ASCERTAINMENT OF TONNAGE AND CERTIFICATION FOR BANGLADESH SHIPS OF 24 METRES IN LENGTH AND OVER

#### Application

3 This Part applies to ships, being ships of 24 metres in length or over, registered or to be registered in Bangladesh under Part --- of the Act and for which the ascertainment of tonnage is required under Regulations made under section ----- of the Act.

#### Method of measurement

4 (1) A ship shall be measured by a surveyor of the Mercantile Marine Office or by a classification society recognized by the Director General.

(2) The gross and net tonnages shall be determined in accordance with sections 6 and 7 provided that in the case of novel types of craft with constructional features which render



## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

the application of these sections unreasonable or impracticable, the gross and net tonnages shall be determined as required by the Director General.

(3) All measurements used in the calculations of volumes shall be taken and expressed in metres to the nearest one hundredth of a metre.

(4) Gross and net tonnages shall be expressed as whole numbers, decimals being rounded off downwards.

### Calculation of volumes

5 (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 the structural boundary surfaces in ships constructed of any other material.

(2) Volumes of appendages shall be included in the total volume.

(3) Volumes of spaces open to the sea shall be excluded from the total volume.

(4) The method and accuracy of the calculations shall be sufficiently detailed to facilitate checking.

### Gross tonnage

6 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; and

$K_1 = 0.2 + 0.02 \log_{10} V$ , as specified in Schedule 2.

### Net tonnage

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

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

where—

$V_c$  = total volume of cargo spaces in cubic metres;

$K_2 = 0.2 + 0.02 \log_{10} V_c$ , as specified in Schedule 2;

$K_3 = \frac{1.25 [GT + 10,000]}{10,000}$

GT = gross tonnage calculated in accordance with section 6;

D = moulded depth amidships in metres;



## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

$d$  = moulded draught amidships in metres;

$N_1$  = number of berths for passengers in cabins with not more than 8 berths; and

$N_2$  = number of other passengers who may be accommodated on the ship;

provided that —

(a) the factor—

$\left(\frac{4d}{3D}\right)^2$  shall not be taken as greater than unity;

(b) the term—

$K_2 V_c \left(\frac{4d}{3D}\right)^2$  shall not be taken as less than 0.25 GT;

(c)  $N_1$  and  $N_2$  shall be taken as zero when  $N_1 + N_2$  is less than 13; and

(d) NT shall not be taken as less than 0.30 GT.

### Segregated ballast oil tankers

8 (1) Where segregated ballast tanks complying with Regulation 18 of Annex 1 of the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 relating to that Convention, are provided in oil tankers, an entry may be made on the International Tonnage Certificate (1969) indicating the total tonnage of these tanks.

(2) The tonnage of such segregated ballast shall be calculated according to the following formula—

$K_1 \times V_b$

where

$K_1 = 0.2 + 0.02 \log_{10} V$ , as specified in Schedule 2;

$V$  = the total volume of all enclosed spaces of the ship in cubic metres; and

$V_b$  = the total volume of segregated ballast tanks in cubic metres measured in accordance with section 5.

### Issue of certificates

9 If it is in order to do so, the Certifying Authority shall issue to the owner, an International Tonnage Certificate (1969) in the form set out in the Convention certifying the tonnages of the ship and containing the particulars to be shown thereon.

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

### Cancellation of certificates

10 (1) Where alterations are made in the arrangement, construction, capacity, use of spaces, total number of passengers the ship is permitted to carry under the terms of the ship's passenger certificate, assigned load line, or permitted draught of the ship such as would cause an increase in the gross or net tonnage, the existing International Tonnage Certificate (1969) shall cease to be valid and shall be delivered up to and cancelled by the Certifying Authority.

(2) When a ship is transferred from the Bangladesh Register the International Tonnage Certificate (1969) shall cease to be valid except when the transfer is to the Administration of a state which is a Contracting Government, in which case the certificate may remain in force for a period not exceeding 3 months or until the new Administration issues another International Tonnage Certificate (1969), whichever is the earlier.

(3) The Certifying Authority shall transmit to the Administration of that Government as soon as possible after the transfer has taken place a copy of the certificate carried by the ship at the time of transfer and a copy of the relevant tonnage calculations.

### Change of net tonnage necessitating issue of certificate

11 (1) When alterations in the values of V, V<sub>c</sub>, d, N1 or N2 as defined in sections 6 and 7 result in an increase in the net tonnage a new International Tonnage Certificate (1969) incorporating the increased net tonnage shall be issued.

(2) In the case of a passenger ship assigned subdivision load lines and where the draught corresponding to the Summer load line, if assigned, differs from that corresponding to the deepest subdivision load line the net tonnage shall, subject to subsection (3), be that determined in accordance with section 7 by applying the draught corresponding to the appropriate assigned load line for the trade in which the ship is engaged.

(3) Subject to subsection (4), where alterations in the values of V, V<sub>c</sub>, d, N1 or N2, as defined in sections 6 and 7, or changes in the position of the load lines result in a decrease in the net tonnage, a new International Tonnage Certificate (1969) incorporating the decreased net tonnage shall not be issued until 12 months have elapsed from the date on which the current certificate was issued.

(4) A new International Tonnage Certificate (1969) may be issued forthwith when—

- (a) a ship which was registered outside Bangladesh is re- registered in Bangladesh;
- (b) a ship undergoes alterations or modifications of a major character such as the removal of a superstructure, which requires an alteration of the assigned load line; or
- (c) the ship is a passenger ship employed in special trades for carriage of large numbers of special trade passengers, such as the pilgrim trade.

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

### Use of gross tonnage to apply for other conventions

12 (1) In the case of a ship —

which is a ship the keel of which was laid or which was at a similar stage of construction before 18th July 1982, the Director General may permit the continuing use of a gross tonnage for the purpose of the application of regulations implementing the International Convention for the Safety of Life at Sea 1974, the Protocol of 1978 relating to that Convention, the International Convention for the Prevention of Pollution from Ships, 1973, the Protocol of 1978 relating to that Convention and the International Convention on Standards of Training, Certification and Watchkeeping of Seafarers, 1978, as amended.

(2) An International Tonnage Certificate (1969) may be annotated, under "Remarks", by the Certifying Authority

(a) in the case of ship to which subsection (1)(a) refers, with the duly completed and signed entry, and

(b) in the case of other ships, with the duly completed and signed entry —

"The ship is additionally measured according to resolution A. 494(XII).

(3) Where such an entry has been made on an International Tonnage Certificate (1969) and the ship undergoes alterations or modifications which affect its tonnage the old tonnage referred to in subsection (1) shall be deleted.

(4) Where a gross tonnage has been ascertained and is to be used in accordance with subsection (1), then any certificate issued for the purposes of the conventions and protocols referred to shall record only that gross tonnage together with an appropriate footnote —

"The above gross tonnage has been determined by a Certifying Authority of Bangladesh in accordance with International Convention on Tonnage Measurement of Ships, 1969."; or

"See REMARKS column of the valid International Tonnage Certificate (1969)".

### PART III

#### APPLICATION, ASCERTAINMENT OF TONNAGE AND CERTIFICATION FOR BANGLADESH SHIPS OF LESS THAN 24 METRES IN LENGTH, OTHER THAN FISHING VESSELS

##### Application

13 This Part shall apply to ships, being ships of less than 24 metres in length, and not being fishing vessels, registered or to be registered under Part ---- of the Act and for which the ascertainment of tonnage is required under Regulations made under section --- of the Act.

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

### Measurement and certification

- 14 (1) A ship shall be measured by a surveyor of the Mercantile Marine Office or by a classification society recognized by the Director General.
- (2) The tonnage of a ship shall be the sum of —
- (a) the product of multiplying together its length overall, extreme breadth over the outside hull and depth in metres and multiplying the resultant figure by 0.16; and
- (b) the tonnage of any break or breaks, calculated for each break by multiplying together its mean length, mean breadth and mean height in metres and multiplying the resultant figure by 0.35.
- (3) For the purpose of this Part —
- (a) the breadth of a ship shall be its extreme breadth over the outside plating, planking or hull, no account being taken of rubbers or fenders even if they are moulded so as to be integral with the hull;
- (b) the depth of a ship shall be measured vertically at the midpoint of the length overall;
- (c) the upper terminal point for depth shall be —
- (i) in the case of a decked ship, the underside of the deck on the middle line or, if there is no deck on the middle line at the point of measurement, the underside of the deck at the side of the ship plus the full deck camber; and
- (ii) in the case of an open ship, the top of the upper strake or gunwale;
- (d) the lower terminal point of depth shall be —
- (i) in the case of a wooden ship, the upper side of the plank at the side of the keel or hog;
- (ii) in the case of a metal ship, the top of the plating at the side of the keel; and
- (iii) in the case of a glass reinforced plastic ship, the inside of the hull;
- (e) in the case of a glass reinforced plastic ship where no keel member is fitted and the keel is of open trough construction, the lower terminal point for depth shall be the top of the keel filling, if fitted, or the level at which the inside breadth of the trough is 10 centimetres, whichever gives the greater depth;
- (f) Where a break exists in the way of the point of measurement for depth, the height of the break shall not be included in the measurement of depth.
- (4) The tonnage determined in accordance with subsection (2) shall be the gross tonnage and net tonnage.
- (5) In the case of a multi-hull ship the tonnage of each hull shall be measured

## **MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020**

separately and the sum of such tonnages shall be used in computing the tonnage referred to in subsection (2).

(6) All measurements used in the calculations of volumes shall be taken and expressed in metres to the nearest one hundredth of a metre.

(7) Tonnage shall be expressed to two decimal places, the second decimal place being increased by one if the third decimal place is 5 or more.

(8) On completion of the measurement the surveyor of the MMO or the classification society as the case may be, shall issue a Certificate of Measurement in a form approved by the Director General.

(9) Where alterations are made in the arrangement, construction, capacity, use of spaces, total number of passengers the ship is permitted to carry under the terms of the ship's passenger certificate, assigned load line, or permitted draught of the ship such as would cause an increase in the tonnage, the existing measurement shall cease to be valid, any certificate shall be delivered up to and cancelled by the issuer and the owner of the ship shall make an application for it to be re-measured in accordance with subsection (1).

(10) Notwithstanding subsection (2) nothing in this Part shall be taken to require any ship the tonnage of which was validly determined under the law in force immediately before the coming into force of these Regulations to have its tonnage re-determined within a period as specified by the Director General.

### **PART IV**

#### **NON-BANGLADESH SHIPS**

##### **Ascertainment of tonnage and certification**

15 (1) The Director General may, at the request of the Administration of a Contracting Government, ascertain the gross and net tonnages of a non-Bangladesh ship in accordance with Part II and issue to the owner an International Tonnage Certificate (1969): in such cases the certificate shall be endorsed to the effect that it has been issued at the request of the Government of the state whose flag the ship is or will be flying, and a copy of the certificate and the calculations of the tonnages shall be transmitted to the requesting Government as soon as possible.

(2) The Certifying Authority may, at the request of an owner of a non-Bangladesh ship flying the flag of a State whose Government is not a Contracting Government, ascertain the gross and net tonnages of the ship in accordance with Part II and issue a Certificate of Bangladesh Tonnage measurement: in such a case the certificate shall bear the endorsement "for use only whilst within Bangladesh waters".

### **PART V**

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

### MISCELLANEOUS

#### **Penalties**

16 Any owner or master who fails without reasonable cause to deliver up a certificate for cancellation as required by sections 10(1) or 14(9) commits an offence punishable on summary conviction by a fine not exceeding One hundred thousand penalty units.

DRAFT

# MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

## SCHEDULE 1

(Section 2)

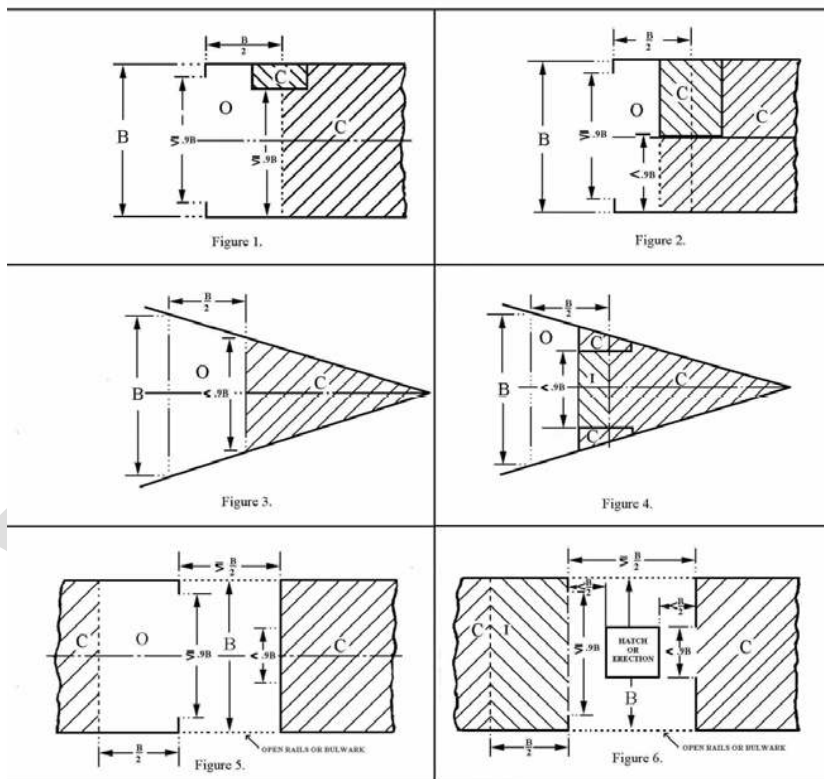
### EXCLUDED SPACES AS DEFINED IN SECTION 2

In the following figures: O = excluded space;

C = enclosed space;

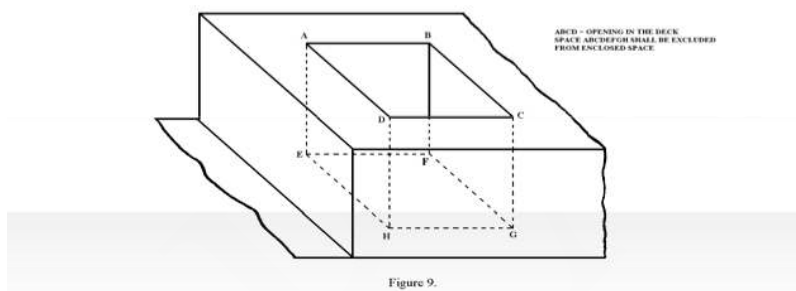
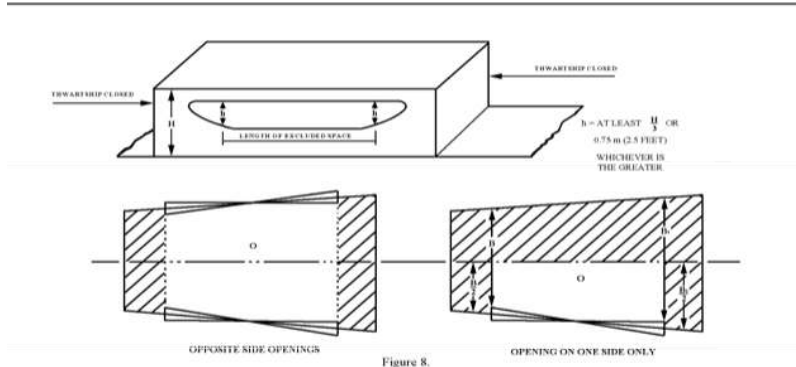
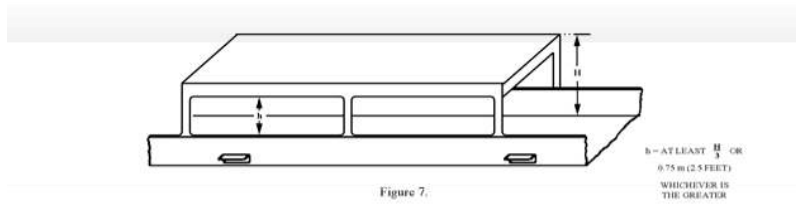
I = space to be considered as an enclosed space. (Hatched-in parts to be included as enclosed spaces;

B = breadth of the deck in way of the opening. (In ships with rounded gunwales the breadth is measured as indicated in Figure 11).





## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020



## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

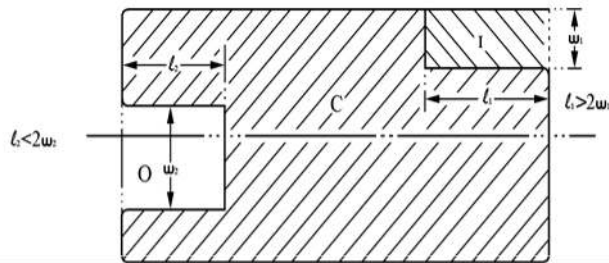


Figure 10.

### SHIPS WITH ROUNDED GUNWALES

SCE

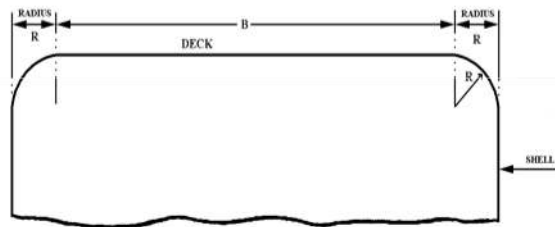


Figure 11.

d 8)

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

### SCHEDULE 2

COEFFICIENTS  $K_1$  AND  $K_2$  REFERRED TO IN SECTIONS 6, 7 AND 8

V or  $V_c$  = Volume in cubic metres;

Coefficients  $K_1$  or  $K_2$  at intermediate values of V or  $V_c$  shall be obtained by linear interpolation

<i>V or <math>V_c</math></i>	<i><math>K_1</math> or <math>K_2</math></i>	<i>V or <math>V_c</math></i>	<i><math>K_1</math> or <math>K_2</math></i>	<i>V or <math>V_c</math></i>	<i><math>K_1</math> or <math>K_2</math></i>	<i>V or <math>V_c</math></i>	<i><math>K_1</math> or <math>K_2</math></i>
10	0.2200	45 000	0.2931	330 000	0.3104	670 000	0.3165
20	0.2260	50 000	0.2940	340 000	0.3106	680 000	0.3166
30	0.2295	55 000	0.2948	350 000	0.3109	690 000	0.3168
40	0.2320	60 000	0.2956	360 000	0.3111	700 000	0.3169
50	0.2340	65 000	0.2963	370 000	0.3114	710 000	0.3170
60	0.2356	70 000	0.2969	380 000	0.3116	720 000	0.3171
70	0.2369	75 000	0.2975	390 000	0.3118	730 000	0.3173
80	0.2381	80 000	0.2981	400 000	0.3120	740 000	0.3174
90	0.2391	85 000	0.2986	410 000	0.3123	750 000	0.3175
100	0.2400	90 000	0.2991	420 000	0.3125	760 000	0.3176
200	0.2460	95 000	0.2996	430 000	0.3127	770 000	0.3177
300	0.2495	100000	0.3000	440 000	0.3129	780 000	0.3178
400	0.2520	110000	0.3008	450 000	0.3131	790 000	0.3180
500	0.2540	120000	0.3016	460 000	0.3133	800 000	0.3181
600	0.2556	130000	0.3023	470 000	0.3134	810 000	0.3182
700	0.2569	140000	0.3029	480 000	0.3136	820 000	0.3183
800	0.2581	150000	0.3035	490 000	0.3138	830 000	0.3184
900	0.2591	160000	0.3041	500 000	0.3140	840 000	0.3185

## MERCHANT SHIPPING (TONNAGE) REGULATIONS 2020

1 000	0.2600	170000	0.3046	510 000	0.3142	850 000	0.3186
2 000	0.2660	180000	0.3051	520 000	0.3143	860 000	0.3187
3 000	0.2695	190000	0.3056	530 000	0.3145	870 000	0.3188
4 000	0.2720	200000	0.3060	540 000	0.3146	880 000	0.3189
5 000	0.2740	210000	0.3064	550 000	0.3148	890 000	0.3190
6 000	0.2756	220000	0.3068	560 000	0.3150	900 000	0.3191
7 000	0.2769	230000	0.3072	570 000	0.3151	910 000	0.3192
8 000	0.2781	240000	0.3076	580 000	0.3153	920 000	0.3193
9 000	0.2791	250000	0.3080	590 000	0.3154	930 000	0.3194
10 000	0.2800	260000	0.3083	600 000	0.3156	940 000	0.3195
15 000	0.2835	270000	0.3086	610 000	0.3157	950 000	0.3196
20 000	0.2860	280000	0.3089	620 000	0.3158	960 000	0.3196
25 000	0.2880	290000	0.3092	630 000	0.3160	970 000	0.3197
30 000	0.2895	300000	0.3095	640 000	0.3161	980 000	0.3198
35 000	0.2909	310000	0.3098	650 000	0.3163	990 000	0.3199
40 000	0.2920	320000	0.3101	660 000	0.3164	1000 000	0.3200

Made this 15<sup>th</sup> day of December, 2019

Director General  
Department of Shipping

**MARINECARE Consultant Bangladesh Ltd**