

# **The Merchant Shipping (Tonnage Measurement Of Ships) Rules, 1960**

UNION OF INDIA

India

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### **Rule**

### **THE-MERCHANT-SHIPPING-TONNAGE-MEASUREMENT-OF-SHIPS-RULES of 1960**

- Published on 17 December 1960
- Commenced on 17 December 1960
- [This is the version of this document from 17 December 1960.]
- [Note: The original publication document is not available and this content could not be verified.]

The Merchant Shipping (Tonnage Measurement Of Ships) Rules, 1960 Published vide Notification Gazette of India, 1960, Part 2, Section 3(i), page 2038.

**1767.**

G.S.R. 1550, dated 17th December, 1960. - In exercise of the powers conferred by clauses (a) and (b) of sub-section (2) of Section 74 of the Merchant Shipping Act, 1958 (44 of 1958), the Central Government hereby makes the following rules, namely---

#### **1. Short title, commencement and application.**

(1) These rules may be called the Merchant Shipping (Tonnage Measurement of Ships) Rules, 1960. (2) They shall come into force on the 1st January, 1961. (3) They shall apply to sea-going ships which exceed 15 tons net and which are fitted with mechanical means of propulsion.

#### **2. [ Definitions. [Substituted by G.S.R. 897, dated 24th April, 1970.]**

- In these rules, unless the context otherwise requires, - (a) "Act" means the Merchant Shipping Act, 1958; (b) "break" means the space above the line of the upper deck, when the deck is cut off and continued at a higher elevation; (c) "continuous deck" includes a deck continuous athwartship and in a fore and aft direction, at least between peak bulkheads, with interruptions in way of propelling machinery space, openings, ladder and stairway, openings, trunks, chain lockers, cofferdams or

steps which do not exceed 1220 millimetres in height : (d) "crew" means seamen and apprentices; (e) "exempted spaces" means spaces in a ship which, either by virtue of their location and usage or by nature of tonnage opening or other specified openings in their sides, are exempted and, therefore, not included in ascertaining her gross tonnage; (f) "gross tonnage" means the sum total of the cubic capacity of spaces below the upper deck and spaces permanently covered and closed-in spaces on or above the upper deck (other than such spaces which are exempt from measurement under these rules) and consists of----- (i) the tonnage below the tonnage deck; (ii) the tonnage of the spaces between the tonnage deck and the uppermost complete deck; (iii) the covered and closed-in spaces on or above the uppermost complete deck; (iv) the engine and light and air spaces above the upper deck; and (v) the excess of hatchways; (g) "load line rules" means the Indian Merchant Shipping (Load Line) Rules, 1934, as continued in force by sub-section (3) of section 461 of the Act; (h) "method" means one of the methods of determining the tonnage of a ship specified in Schedule I; (i) "propelling power allowance" means the deduction from the gross tonnage on account of the space occupied by the propelling power machinery; (j) "register tonnage" or "net tonnage" means the tonnage arrived at after making from the gross tonnage of a ship the allowances and deductions permissible under these rules; (k) "Schedule" means a Schedule to these rules; (l) "Second deck" for the purpose of tonnage mark means the deck next below the uppermost complete deck which is continuous in a fore and aft direction at least between peak bulkheads, is continuous athwartships, and is fitted as an integral and permanent part of the ship's structure, with proper covers fitted to all main hatchways; (m) "Surveyor" means a surveyor appointed under section 9 of the Act; (n) [ "ton" means a unit of volume equal to 2.83 cubic metres (alternatively one cubic metre is equivalent to 0.353 ton); ] (o) "tonnage deck" means the second deck except in the case of single deck ships, in which case it means the upper deck; (p) "trunk" means a hatch and ventilation trunks which do not extend longitudinally completely between main transverse bulkheads; (q) "uppermost complete deck" for the purpose of tonnage mark means the upper deck of a ship exposed to sea and weather fitted as an integral part of the ship's structure with permanent means of closing all openings in the weather portions thereof : Provided that all openings in the sides of ship below the deck, other than openings situated abaft a transverse water-tight bulkhead, placed aft of the rudder stock, are fitted with permanent means of water-tight closing.]

### 3. Gross Tonnage.

(1) The gross tonnage of a ship shall be determined by the methods and in the circumstances specified below, namely :- (a) By method I, at the time of registration of a ship and in other cases to which that method is applicable; (b) By method II with the permission of the Central Government, where the ship has cargo on board and in other cases where method I is not applicable : Provided that the owner of any ship the tonnage of which was determined by method II may, at any subsequent time, apply to the Central Government for the determination of its tonnage by method I. The ship shall thereupon be re-measured and tonnage altered accordingly. (c) By method III, in the case of open ships. (2) All measurements for the purpose of ascertaining the tonnage of a ship shall be in metres or fractions of a metre. [\*\*\*] [Omitted by G.S.R. 897, dated 24th April, 1970.]

#### **4. Deductions from Gross, Tonnage.**

- [(1) From the gross tonnage of a ship determined in accordance with the provisions of rule 3, deductions shall be made on account of the following spaces, namely :-(a)allowance for propelling power machinery in ships propelled by steam or other mechanical power determined in accordance with rule 5;(b)any space used exclusively for the accommodation of master or crew :Provided that such space conforms to the requirements of the Merchant Shipping (Crew Accommodation) Rules, 1960, but excluding the following space :(i)space appropriated for the storage of fresh water;(ii)space appropriated for the storage of provisions (other than fresh water) in excess of 15 per cent of the aggregate crew accommodation space;(c)the wheelhouse and chartroom, and space fitted with the appropriated for the use of radio and navigational aids;(d)chain lockers and space appropriated for, or for the working of the steering gear, anchor gear and capstan;(e)space appropriated for the storage of safety equipment or batteries;(f)workshop and store rooms appropriated for the use of pumpmen, electricians, carpenters and boatswains, and the lamp-room;(g)space occupied by the donkey engine and boilers if they area outside the propelling machinery space and connected to the main pumps of the ship;(h)space occupied by the main pumps of the ship if they are outside the propelling machinery space;(i)any space below the upper deck (other than double bottom) adapted solely for water ballast:Provided that no deduction shall be made on account of any space unless it has previously been included in the gross tonnage.] [Substituted by G.S.R. 639, dated 14th May, 1975.](2)No deduction on account of any space shall be made under sub-rule (1) unless--(a)the space has been certified by a surveyor as reasonable in extent and properly and efficiently constructed for the purpose for which it is intended;(b)a notice is permanently marked in or over such space stating the purpose for which it is to be applied.

#### **5. Propelling Power Allowance.**

(1)The allowance for engine-room space in ships propelled by steam or other power requiring engine-room shall be ascertained in accordance with method IV specified in Schedule 1. The deductions on account of propelling power machinery shall be regulated as follows, namely :--(a)where the tonnage of the space occupied by and necessary for the proper working of the boilers and machinery is 13 per cent or above and under 20 percent of the gross tonnage, the deduction shall be 32 per cent of the gross tonnage;(b)where such space is below 13 per cent of the gross tonnage, the deduction shall be 32 per cent of the gross tonnage reduced proportionately;(c)where such space is 20 per cent and above of the gross tonnage, the deduction shall consist of the tonnage of the space occupied by or required to be enclosed for the proper working of the boilers and machinery with the addition of three-fourth of the tonnage of that space;(d)in cases falling under clauses (b) and (c), the space occupied by the shaft tunnel shall also be added to the engine-room space.(2)Such portion of the space above the crown of the engine-room and above the upper deck as is framed in for the machinery or for the admission of light and air shall not be included in the measurement of the spaces occupied by the propelling power machinery, unless the owner of the ship has applied in writing to the Central Government in that behalf:Provided that----- (a)the portion is first included in the measurement of the gross tonnage;(b)a surveyor certifies that the portion so framed in is reasonable in extent and is so constructed as to be safe and seaworthy, and that it cannot be used for any purpose other than the machinery or for the admission of light and air

to the machinery or boilers of the ship.(3)The allowance made under this head shall not in any case exceed fifty-five per cent of that portion of the tonnage of the ship which remains after deducting from the gross tonnage the allowance on account of the space used for the accommodation of the master and the crew provided that this shall not apply to ships constructed for the purpose of towing vessels so long as they are employed as tugs but not employed for the carriage of passengers, cargo or stores or when using dry docks, floating docks or places provided for repairing of vessels.

## **6. Spaces for master and crew.**

(1)No deduction on account of any space intended for the master or the crew shall be made unless a surveyor has certified that space is used for that purpose.(2)The maximum space allowable on account of storage under this head shall not exceed fifteen per cent of the deductions for the master's and crew accommodation.

## **7. Allowance for Water Ballast.**

- The allowance on account of water ballast spaces shall be regulated in accordance with the [provisions of] [Substituted by G.S.R. 897, dated 24th April, 1970.] Schedule II.

## **8. Exemptions.**

- [(1) The following spaces shall be measured but, save as provided in rule 8A, exempted from inclusion in the gross tonnage---(a)on application in writing the owner or agent of the ship-(i)deck shelters for deck passengers;(ii)spaces abreast side openings;(iii)open passage-ways serving other than passenger spaces above deck;(b)permanently closed spaces which, had they been provided with tonnage openings, would have qualified for exemption but for the coming into force of the Merchant Shipping (Tonnage Measurement of Ships) Amendment Rules, 1970(i)spaces, including spaces situated in the detached superstructures or deck houses, on or above the uppermost complete deck;(ii)spaces situated within the uppermost tween deck so long as, when the ship is in the summer zone, the upper edge of the tonnage mark referred to in rule 8B, or when the ship is in fresh water or the tropical zone, the upper edge of the additional line referred to in rule 8C, is not submerged.](2)[The following permanently closed-in spaces situated on or above the upper deck shall not be included in the Gross Tonnage provided they are reasonable in extent, namely :-(a)space fitted with the appropriated for the use of machinery or condensers;(b)the wheelhouse and chartroom, and space fitted with and appropriated for the use of radio and navigational aids;(c)skylights, domes and trunks which light or ventilate the space they serve;(d)chain lockers, and space appropriated for working the anchor gear and capstan;(e)space appropriated for the storage of safety equipment or batteries;(f)compartments and access hatches serving as protection for stairways or ladderways leading to space below, and openings over such stairways and ladderways including escape trunks;(g)the galley, and any separate bakery fitted with ovens; provided in either case that no part thereof is appropriate for use for any other purpose;(h)washing and sanitary accommodation forming part of the crew accommodation or appropriated for the use of the master;(i)workshops and storerooms appropriated for the use of pumpmen, engineers, electricians, carpenters and boatwains, and the lamproom;(j)water ballast tanks not appropriated for use for any other purpose.](3)The

Central Government may, subject to such conditions as maybe prescribed, grant further exemptions as may be deemed necessary.[8-A. Assignments of tonnage mark. [Inserted by G.S.R. 897, dated 24th April, 1970.]- The spaces referred to in sub-clause (ii) of clause (b) of sub-rule 1 of rule 8 shall not be exempted from inclusion in the gross tonnage of a ship which does not have tonnage markings in accordance with these rules.

## 8.

-B. Form and position of tonnage mark.(1)The tonnage mark shall be of the form set out in Schedule IIA and shall consist of a horizontal line 380 millimetres long and 25 millimetres wide, upon which shall be placed for identification an inverted equilateral triangle, each side of which shall be 300 millimetres long and 25 millimetres wide, with its apex on the mid-point of the said horizontal line.(2)Such mark shall be cut or welded on each side of the ship abaft amidships, but as near thereto as practicable, but the apex of the triangle shall not be nearer than 540 millimetres to the centre of the load line disc assigned under the load line rules, nor farther than 2000 millimetres abaft the vertical centre line of such load line disc.(3)The upper edge of the tonnage mark shall be located below the line of the second deck, the position of which shall be determined in accordance with the Table set out in Schedule IIB.(4)Notwithstanding anything contained in sub-rule (3), when the free board deck, as determined under the load line rules, coincides with the second deck, the tonnage mark shall be placed on a line level with the uppermost part of the load line grid.

## 8.

-C. Additional line.(1)To indicate fresh water and tropical draught an additional horizontal line, 230 millimetres long and 25 millimetres wide, may be cut or welded above the tonnage mark (see Schedule IIA), except when the tonnage mark is assigned in accordance with sub-rule (4) of rule 8B.(2)Such additional line shall be measured from a vertical line 25 millimetres wide marked at the after end of, and perpendicular to, the tonnage mark; the length of the vertical line being one forty-eighth of the moulded draught to the tonnage mark.

## 8.

-D. Ships having no load line markings.- For ships to which no load line has been assigned, the line of the uppermost complete deck shall be marked amidships by a horizontal line 300 millimetres long and 25 millimetres wide.

## 8.

-E. Alternate gross tonnage.(1)Except when the tonnage mark is assigned in accordance with sub-rule (4) of rule 813, there shall be determined for every ship which has been assigned a tonnage mark, two gross tonnage for the purpose of deciding whether exemption under sub-clause (ii) of clause (b) of sub-rule (1) of rule 8 is admissible according as the tonnage mark is submerged or not.(2)In the case of any ship for which two tonnages have been determined in accordance with

sub-rule (1) and which is in possession of a certificate of registry showing such two tonnages, the lower of the two tonnages shall be construed to be its tonnage for the time being while the ship is so loaded as not to submerge the tonnage mark assigned to it in accordance with rule 8A, for the purposes of levy of any fee or dues which are based on the gross tonnage of a ship measured in accordance with the provisions of these rules :Provided that, for the purposes of Parts VI, VII, VIII and IX of the Act, the qualifying gross tonnage shall be the higher figure.

## 8.

-F. Higher tonnage in special cases.- Notwithstanding anything contained in rule 8B, if the Central Government finds that in respect of an Indian ship possessing dual tonnage certificate any country outside India takes into account the higher tonnage for the purpose of levy of tonnage dues, whether or not the tonnage mark is submerged, the Central Government may, by notification in the Official Gazette, direct that in respect of a ship registered in that country the higher tonnage shall constitute the basis of levy of tonnage dues in India.] [Substituted by G.S.R. 639, dated 14th May, 1975.]

## 9. Register Tonnage on net tonnage.

(1)The register tonnage of a ship shall be arrived at by deducting from the [gross tonnage or gross tonnages (referred to in rule 8F.)] [Substituted by G.S.R. 897, dated 24th April, 1970.] of the ship the allowances of the nature and to the extent admissible under these rules.[\*\*\*] [Omitted by G.S.R. 897, dated 24th April, 1970.](3)Where the tonnage of a ship has been or is deemed to have been ascertained under these rules, the tonnage shall not be altered unless the alteration is made in the form or the capacity of the ship or it is discovered that the tonnage has been erroneously computed, and in either of these cases, the ship shall be remeasured and her tonnage ascertained in accordance with these rules.[9-A. Deck Cargo and cargo in exempted spaces. [Inserted by G.S.R. 897, dated 24th April, 1970.](1)If any ship other than a ship exclusively engaged in trading between any port or place in India--(a)carries cargo in the enclosed space between the uppermost complete deck and the second deck while the tonnage mark is not submerged, or(b)carries any deck cargo, that is to say, carries any cargo in any uncovered space upon deck or in any covered space not included in the cubical contents forming ship's register tonnage,the tonnage of space so utilised for carrying cargo shall be measured in the manner specified in Schedule I and added to the relevant tonnage of the ship and the total tonnage so calculated shall be the basis for the levy of dues based on ship's register tonnage.Note. -The space so occupied shall be deemed to be the space limited by straight lines enclosing a rectangular space sufficient to include the goods.(2)The tonnage of spaces referred to in sub-rule (1) shall be ascertained by the officer of the customs referred to in Section 3 of the Customs Act, 1962, in the manner directed in paragraph (6) of Method I in Schedule I and when so ascertained shall be entered by him in ship's official log book and also in a memorandum which he shall deliver to the Master and the Master shall, when any dues are demanded on ship's tonnage, produce that memorandum in the like manner as if it were ship's Certificate of Registry or in the case of a ship other than an Indian ship a document equivalent to a Certificate of Registry.] [Substituted by G.S.R. 897, dated 24th April, 1970.]

## **10. Tonnage ascertained in foreign countries.**

(1) Where the tonnage of a ship has been ascertained in accordance with the rules in force in a foreign country which has adopted these rules or in accordance with the rules which are substantially similar to these rules, the Central Government may accept the tonnage specified in the certificate of registry issued by that country in the same manner, to the same extent and for the same purposes as the tonnage indicated in the certificate of registry issued under these rules. (2) Notwithstanding anything contained in sub-rule (1), the Central Government may, if it is of opinion that the tonnage of any foreign ship as ascertained by the rules of the country to which she belongs differs materially from the tonnage of that ship as it would be if it is measured under these rules, direct that the ship shall be re-measured and her tonnage ascertained in accordance with these rules.

## **11. Suez Canal and Panama Special Tonnage Certificate.**

- If a request is received from a shipowner for measurement of a ship for Suez Canal or Panama Special Tonnage Certificate, the ship may be re-measured and her tonnage ascertained in accordance with the rules issued by the Suez Canal or Panama Canal authorities.

## **12. [ [Inserted by G.S.R. 639, dated 14th May, 1975.]**

Notwithstanding any procedure set out in Schedule I for the measurement of tonnage of ships the volume computed in cubic metres may be multiplied by the factor 0.353 to arrive at volume in tons.][13] [Re-numbered by G.S.R. 639, dated 14th May, 1975.]. Fees.- Fees shall be levied under these rules at the rates and for the purposes specified in Schedule III. Rules As To The Measurement Of Tonnage

I

(See rule 2) Method I (1) Measurement of ships to be registered : and other ships of which the hold is clear. - Lengths. Measure the length of the ship in a straight line along the upper side of the tonnage deck from the inside of the inner plank (average thickness) at the side of the stem to the inside of the midship stem timber or plank there, as the case may be (average thickness), deducting from this length what is due to the rake of the bow in the thickness of the deck, and what is due to the rake of the stern timber in the thickness of the deck, and also what is due to the rake of the stem timber in one-third of the round of the beam; divide the length so taken into the number of equal parts required by the following Table, according to the class in such Table to which the ship belongs : [Table [Substituted by G.S.R. 897, dated 24th April, 1970.] Class 1. - Ships of which the tonnage deck is according to the above measurement 15.24 metres long or under, into 4 equal parts; Class 2. - Ships of which the tonnage deck is according to the above measurement above 15.24 metres long and not exceeding 36.58 metres, into 6 equal parts; Class 3. - Ships of which the tonnage deck is according to the above measurement above 36.58 metres long and not exceeding 54.86 metres, into 8 equal parts; Class 4. - Ships of which the tonnage deck is according to the above measurement

above 54.86 metres long and not exceeding 206.74 metres, into 10 equal parts; Class 5. - Ships of which the tonnage deck is according to the above measurement above 206.74 metres, into 12 equal parts.] In the case of a break or breaks in a double bottom for water ballast, the length of the ship is to be taken in parts according to the number of breaks, and each part divided into a number of equal parts according to the class in the above Table to which such length belongs. (2) Transverse areas. - Then, the hold being first sufficiently cleared to admit of the required depths and breadths being properly taken, find the transverse area of the ship at each point of division of the length or each point of division of the parts of the length as the case may require as follows :- Measure the depth at each point of division from a point at a distance of one-third of the round of the beam below the tonnage deck, or, in case of a break, below a line stretched in continuation thereof, to the upper side of the floor timber (upper side of the inner plating of the double bottom) at the inside of the limber strake, after deducting the average thickness of the ceiling which is between the bilge planks and limber strake; then, if the depth at the midship division of the length does not exceed [4.88 metres] [Substituted by G.S.R. 897, dated 24th April, 1970.], divide each depth, into five equal parts; then measure the inside horizontal breadth at each of the four points of division, and also at the upper point of the depth, extending each measurement to the average thickness of that part of the ceiling which is between the points of measurement; number these breadths from above, (i.e., numbering the upper breadth one, and so on down to the fifth breadth; multiply the second and fourth by four, and the third by two; add these products together, and to the sum add the first breadth and the fifth; multiply the quantity thus obtained by one-third of the common interval between the breadths, and the product shall be deemed the transverse area of the upper part of the section; then find the area between the fifth and lower point of the depth by dividing the depth between such points into four equal parts and measure the horizontal breadths at the three points of division and also at the upper and lower points, and proceed as before and the sum of two parts shall be deemed to be the transverse area; but if the midship depth exceed [4.88 metres] [Substituted by G.S.R. 897, dated 24th April, 1970.], divide each depth into seven equal parts instead of five, and measure as before directed the horizontal breadths at the six points of division, and also at the upper point of the depth, number them from above as before; multiply the second, fourth, and sixth by four, and the third and fifth by two; add these products together, and to the sum add the first breadth and the seventh; multiply the quantity thus obtained by one-third of the common interval between the breadths, and the products shall be deemed the transverse area of the upper part of the section; then find the lower part of the area as before directed, and add the two parts together, and the sum shall be deemed to be the transverse area. In all cases, where the top of the double bottom is horizontal it will be sufficient to measure the transverse areas. (3) Computation from areas. - Having thus ascertained the transverse area at each point of division of the length of the ship, or each point of division of the parts of length, as the case may require, as required by the above table, proceed to ascertain the register tonnage under the tonnage deck in the following manner : Number the areas respectively, 1, 2, 3, etc. No. 1 being at the extreme limit of the length at the bow, or of each part of the length, and the last number at the extreme limit of the length of the stern, or the extreme limit at the after end of each part of the length : then whether the length be divided according to the table into four or 12 parts, as in classes 1 and 5, or any intermediate number, as in classes 2, 3 and 4, multiply the second and every even numbered area by four, and third and every odd numbered area (except the first and last) by two; add these products together, and to the sum add the first and last if they yield anything; multiply the quantity thus obtained by one-third of the common interval



between the areas, and the product will be the cubical contents of the space, or cubical contents of each part if the ship is measured in parts under the tonnage deck; divide this product, or if measured in parts the products of the several parts added together, [by 2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.], and the quotient, being the tonnage under the tonnage deck, shall be deemed to be the register tonnage of the ship, subject to any additions and deductions under the rules.(4)In case of decks above the tonnage deck. - If the ship has a third deck, commonly called a spar deck, the tonnage of the space between it and the tonnage deck shall be ascertained as follows :-Measure [\* \* \*] [Omitted by G.S.R. 897, dated 24th April, 1970] the inside length of the space at the middle of its height from the plank at the side of the stem to the lining on the timbers at the stern, and divide the length into the same number of equal parts as the length of the tonnage deck is divided as above directed; measure (also at the middle of its height) the inside breadth of the space at each of the points of division, also the breadth at the stem and the breadth at the stern : number them successively 1, 2, 3, etc., commencing at the stem; multiply the second and all the other even numbered breadths by four, and the third and all the other odd numbered breadth (except the first and the last) by two; to the sum of these products add the first and last breadths; multiply the whole sum by one-third of the common interval between the breadths, and the result will give in superficial [metres] [Substituted by G.S.R. 897, dated 24th April, 1970.] the mean horizontal area of the space; measure the mean height of the space, and multiply by it the mean horizontal area, and the product will be the cubical contents of the space; divide this product by [2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.] and the quotient shall be deemed to be the tonnage of the space and shall be added to the tonnage of the ship ascertained as aforesaid. If the ship has more than three decks, the tonnage of each space between decks above the tonnage deck shall be severally ascertained in manner above described, and shall be added to the tonnage of the ship ascertained as aforesaid.(5)Poop, deck-house, forecastle, and any other closed-in space. - If there be a break, a poop or any other permanent closed-in space on the upper deck available for cargo or stores, or for the berthing or accommodation of passengers or crew, the tonnage of that space shall be ascertained as follows :Measure the internal mean length of the space [\* \* \*] [Omitted by G.S.R. 897, dated 24th April, 1970.] and divide it into two equal parts; measure at the middle of its height three inside breadths, namely, one at each end and the other at the middle of the length; then to the sum of the end breadths add four times the middle breadth, and multiply the whole sum by one-third of the common interval between the breadths, the product will give the mean horizontal area of the space; then measure the mean height, and multiply by it the mean horizontal area; divide the product by [2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.] and the quotient shall be deemed to be the tonnage of the space and shall be added to the tonnage under the tonnage deck ascertained as aforesaid. Provided that no addition shall be made in respect of any building erected for the shelter of deck passengers, and approved by the Director General of Shipping.(6)[ The cubic capacity of covered or uncovered spaces upon deck, when used for carriage of cargoes, shall be determined by multiplying the area, in square metres, of spaces occupied by cargo, as determined in accordance with the provisions of sub-rule (2) of rule 9A, by the maximum height of goods in metres. The cubic capacity in metres so arrived shall be divided by 2.83 for determining tonnage of such spaces.] [Inserted by G.S.R. 897, dated 24th April, 1970.]Method II(1)Measurement of ships not requiring registry with cargo on board and ships which cannot be measured under Method I Length-Breadth. -Girthing of the ship. Measure the length on the uppermost deck from the outside of the outer plant at the stem to the aft side of the stern-post, deducting therefrom the distance between the aft side of

the stern-post and the rabbet of the stern-post at the point where the counter plank crosses it; measure also the greatest breadth of the ship to the outside of the outer planking or wales, and then, having first marked on the outside of the ship on both sides thereof the height of the upper deck at the ship's sides girth the ship at the greatest breadth in a direction perpendicular to the keel from the height so marked on the outside of the ship on the one side to the height so marked on the other side by passing a chain under the keel; to half the girth thus taken add half the main breadth; square the sum; multiply the result by the length of ship taken as aforesaid; then multiply this product by the factor [0.17 (seventeen hundredths)] [Substituted by G.S.R. 897, dated 24th April, 1970] in the case of ships built of wood, and [0.18 (eighteen hundredths)] [Substituted by G.S.R. 897, dated 24th April, 1970.] in the case of ships built of iron and the product shall be deemed the register tonnage of the ship, subject to any additions and deductions under the rules. (2) Poop, deck-house, forecastle, and other closed-in spaces on upper deck. - If there be a break, a poop, or other closed-in space on the upper deck, the tonnage of that space shall be ascertained by multiplying together the mean length, breadth and depth of the space, and dividing the product [by 2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.] and the quotient so obtained shall be deemed to be the tonnage of the space, and shall be added to the tonnage of the ship ascertained as aforesaid. Method III Measurement of open ships. - In ascertaining the tonnage of open ships the upper edge of the upper strake is to form the boundary line of measurement, and the depths shall be taken from an athwartship line, extended from upper edge to upper edge of the said strake at each division of the length. Method IV Measurement of allowance for engine room space. - (i) Measure the mean depth of the space from its crown to the ceiling at the limber strake, measure also three, or, if necessary, more than three breadths of the space at the middle of its depth, taking one of those measurements at each end, and another at the middle of the length; take the mean of those breadths; measure also the mean length of the space between the foremost and aftermost bulkheads or limits of its length, excluding such parts, if any, as are not actually occupied by or required for the proper working of the machinery; multiply together these three dimensions of length, breadth and depth, divide the product [by 2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.] and the result shall be deemed the tonnage of the space below the crown; then find the cubical contents of the space or spaces, if any, above the crown aforesaid, which are framed in for the machinery or for the admission of light and air, by multiplying together the length, depth, and breadth thereof; add such contents to the cubical contents of the space below the crown; divide the sum [by 2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.]; and the result shall (subject to the provisions hereinafter contained) be deemed to be the tonnage of the space. (ii) If in any ship in which the space for propelling power is to be measured the engines and boilers are fitted in separate compartments, the contents of each shall be measured severally in like manner, according to the above method, and the sum of their several results shall be deemed to be the tonnage of the said space. (iii) In the case of screw steamers in which the space for propelling power is to be measured, the contents of the shaft trunk shall be ascertained by multiplying together the mean length, breadth, and depth of the trunk, and dividing the product [by 2.83] [Substituted by G.S.R. 897, dated 24th April, 1970.]. (iv) If in any ship in which the space aforesaid is to be measured any alteration be made in the length or capacity of the spaces, or if any cabins be fitted in the space, the ship shall be deemed to be a ship not registered until re-measurement.

**II**

(See rule 7) **Water Ballast Spaces** The maximum allowance for water ballast spaces shall not exceed 19 per cent of the gross tonnage, irrespective of the size of the ship. In calculating such allowance, the capacity of all water ballast spaces above the double bottom may be taken into account.

**IIA**

[See rule 88(1)-7] **Tonnage Mark**

**IIB**

[See Rule 8B (3)] **Tonnage Mark Table** Minimum distance front the moulded line of the second deck to the upper edge of the tonnage mark in millimetres.

Length in metres.	Lt.	Lt/Dt							
	12	13	14	15	16	17	18	19	20
67 and under	51	51	51	51	51	51	51	51	51
70	81	51	51	51	51	51	51	51	51
73	118	51	51	51	51	51	51	51	51
76	157	82	51	51	51	51	51	51	51
79	201	119	51	51	51	51	51	51	51
82	246	159	84	51	51	51	51	51	51
85	294	200	120	51	51	51	51	51	51
88	344	344	158	83	51	51	51	51	51
91	398	291	199	119	51	51	51	51	51
94	455	341	243	158	83	51	51	51	51
97	515	393	288	198	119	51	51	51	51
97	515	393	288	198	119	51	51	51	51
100	577	447	336	240	135	81	51	51	51
103	643	506	388	386	196	117	51	51	51
106	713	567	442	334	239	156	82	51	51
109	785	631	499	385	285	196	118	51	51
112	862	699	559	438	333	240	157	83	51
115	943	772	624	497	386	288	200	118	52
118	1026	845	690	556	439	336	243	161	87
121	1111	921	758	617	494	385	288	202	124
124	1199	1000	829	682	553	439	338	247	165
127	1279	1075	900	749	617	500	397	304	220
130	1362	1154	975	820	685	566	460	365	279

133	1450	1237	1054	896	757	635	527	429	342
136	1541	1323	1135	974	832	707	596	496	407
139	1636	1413	1222	1057	912	784	671	569	478
142	1732	1504	1309	1140	992	862	746	642	548
145	1829	1597	1397	1225	1074	941	823	717	621
148	1926	1688	1485	1309	1555	0119	898	790	692
151	2020	1778	1570	1390	1233	1095	971	861	761
154	2112	1865	1653	1470	1309	1168	1042	930	828
157	2203	1951	1735	1548	1384	1241	1112	998	894
160	2288	2032	1812	1622	1455	1308	1177	1061	955
162	2374	2112	1888	1694	1525	1376	1241	1122	1015
166	2455	2189	1961	1763	1591	1438	1302	1181	1072
169	2537	2866	2033	1832	1656	1501	1363	1239	1128
172	2616	2340	2103	1899	1720	1562	1421	1295	1182
175	2694	2414	2173	1965	1783	1622	1479	1351	1236
178	2772	2487	2242	2030	1845	1682	1536	1406	1289
181	2350	2560	2312	2096	1907	1741	1593	1461	1342
184	2924	2629	2376	2157	1965	1797	1640	1512	1391
187	2999	2699	2441	2219	2024	2853	1700	1563	1440
190	3072	2768	2506	2280	2083	1909	1753	1614	1489
193	3144	2835	2569	2340	2139	1962	1804	1663	1536
196	3215	2901	2632	2398	2195	2014	1855	1711	1582
199	3285	2967	2694	2456	2250	2067	1905	1759	1628
202	3356	3032	2754	2513	2304	2118	1953	1805	1672
205	3425	3096	2814	2570	2357	2169	2001	1851	1716
208	3493	3160	2874	2626	2410	2219	2049	1897	1760
211	3561	3223	2933	2682	2462	2263	2096	1942	1803
214	3628	3285	2991	2736	2513	2317	2142	1986	1845
217	3694	3346	3048	2790	2562	2365	2187	2029	1886
220	3760	3407	3105	2843	2613	2412	2232	2072	1927
223	3825	3467	3161	2894	2662	2458	2276	2113	1966
226	3889	3526	3216	2947	2710	2504	2319	2154	2005
229	3951	3584	3270	2998	2758	2549	2361	2194	2043
232	4013	3642	3323	3047	2805	2593	2402	2233	2080
235	4075	3699	3376	3096	2841	2636	2443	2272	2117
238	4136	3756	3438	3144	2897	2678	2483	<sup>1</sup> 231	2153
241	4197	3810	3479	3192	3941	2720	2523	2347	2188

244 4257 3865 3530 3240 2986 2762 2562 2384 2223

Note. - (1) Length (Lt) used in the tonnage mark table shall be the distance on the second deck between two points, of which the foremost is the point where the underside of that deck or the line thereof at the stem, meets the inner surface of the ceiling sparring or frames, and the aftermost is the point where the underside of that deck or the line thereof, meets the inner surface of the ceiling sparring or frames in the middle plan at the stem. Where the second deck is stepped an equivalent length shall be used. (See figure I)(2)Depth (Ds) to be used in the tonnage mark table is the moulded depth to the second deck. Where the second deck is stepped an equivalent depth shall be used.(See figure I).Figure I(3)The tonnage mark table is given for the ratios Lt/Ds from 12 to 20 for lengths at intervals of 3 metres upto 244 metres. For intermediate lengths and Lt/Ds ratios the corresponding distance should be obtained by interpolation. In other cases figures should be obtained by extrapolation.

### III

(See Rule 12)

(a) Measurement for Indian Tonnage Rs.P.

(i) For measurement for one of the following under Method I in Schedule I:-

First measurement of an Indian ship

Assignment of Tonnage Mark

Re-measurement including under-deck tonnage

First measurement of a foreign ship for a certificate of Indian tonnage

Re-measurement, including under-deck tonnage, of a foreign ship for renewal of a certificate of Indian tonnage

Re-measurement of a ship previously measured under Method U in Schedule I

Re-measurement of under-deck tonnage

Ships not exceeding 50 tons 80.00

Ships exceeding 50 tons but not exceeding 100 tons For each additional 100 tons or part of 100 tons, 175.00

above 100 tons, but not exceeding 20,000 tons 25.00

10.00

For each additional 100 tons or part of 100 tons, exceeding 20,000 tons

(ii) For measurement under Method II and Rs. P.

Method III in Schedule II-First measurement of an Indian ship

First measurement of a foreign ship for

Certificate of Indian Tonnage half the fee in (a)(i)

Re-measurement which includes under-deck tonnage

(iii) For re-measurements not involving under-deck tonnage

(Indian or foreign ships)

For one of the following re-measurement:

alterations on the upper deck;

alterations in the engine room;

light and air spaces;

crew accommodation;

water ballast spaces;

Ships not exceeding 50 tons 25.00

Ship exceeding 50 tons but not exceeding 100 tons 35.00

For each additional 100 tons or part of 100 tons exceeding 100 tons 5.00

Maximum fee for each item 215.00

The fee for re-measurement for crew accommodation covers the inspection of the crew accommodation if the inspection is made at the same time as the re-measurement.

(iv) For inspection made necessary by minor alterations (rig, engines, etc.) 40.00

(v) For the renewal of a foreign ship's certificate of Indian tonnage or for the issue of a certificate of Indian tonnage to a foreign ship that was previously Indian.

When a Surveyor's check measurements show that no alterations have occurred and re-measurement is unnecessary.

When some re-measurement is necessary although the under deck is unaltered or when measurement is necessary for the assignment of a tonnage mark	80.00
	Plus the fee in (iii) for any re-measurements required.
(vi) For a copy of a certificate of Indian tonnage	10.00
(b) Measurement for Suez and Panama Tonnage	
(i) For first measurement of a ship when the Indian tonnage figures are available for a Suez Canal or a Panama Canal Certificate	two-fifths of the appropriate fee in (a)(i).
For Suez Canal and a Panama Certificate if the measurements are made at the same time	three-fifths of the appropriate fee in (a)(i)
(ii) For first measurement of a ship when the Indian tonnage figures are not available.	the fee in (a)(i) based on canal gross tonnage.
For a Suez Canal or a Panama Canal Certificate	
For a Suez Canal and a Panama Canal Certificate, if the measurements are made at the same time	the fee in (a)(i) based on canal gross tonnage plus two-fifths of the appropriate fee in (b)(i).
(iii) For re-measurement and further certificate or certificates.	
These fees cover the re-measurement of a ship (except under deck, for Indian tonnage if the measurements are made at the same time, but the fee paid must not be less than the appropriate fee in (a) (iii).	
(iv) For a copy of a certificate	20.00
(v) For the supply of details of Suez Canal or Panama Canal tonnage calculations to an owner	95.00
The fees for measurement of tonnage under (a) and (b) cover any number of separate visits to the ship which the surveyor may find it necessary to make.	
(c) For inspecting tonnage marks made for the purposes of rules 8A and 8B, irrespective of the number of visits required by the surveyor for inspection	120.00
Note :-The expression "tons" used in the Schedule "means gross" tons and where alternate gross tonnages are determined, the higher figure of gross tonnage.	