

Inland ship (Tonnage measurement) Rules, 2001

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S. R. O. no 307-Law/2001- As empowered by Section 82 of Inland Shipping Ordinance ,1976(LXXII of 1976) government has made following rules which was pre published on 27th September 1999 also 12th Ashwin 1406 Bangla vide S,R,O No 287-Law/99 as required by subsection (1) of section 82 of this ordinance.

Chapter 1

Beginning

1. Brief Introduction

This regulation shall be termed as Inland Ship(tonnage measurement) rules.

2. Definitions:

Subject to nothing is contrary to subject or reference, in this rules:

- a) "Department" means Department of Shipping
- b) "Ordinance" means The Inland Shipping Ordinance 1976(LXXII of 1976)
- c) "Inland water" means Inland water defined in section 2(f) of ordinance
- d) "Gross tonnage" means defined size of ship as per rule 11
- e) "Ship" or "Inland ship" means "inland ship" defined in ordinance section 2(e)
- f) "Length(L)" means distance from ship's stem at forward to Rudder post at aft or centre of rudder stock in case there is rudder post at Load water line level
- g) "New ship" means ships which keel laid on or after this rule entered into force
- h) "Net tonnage " means defined useable capacity of ship as per rule 12
- i) "Administration" means Inland ship Safety Administration(ISSA)
- j) "Principal Officer" means Principal officer for Inland ship Safety Administration
- k) "Existing ship " means any ship other than new ship
- l) "Director General " means Director General of Department of Shipping
- m) "Passenger" means any person among people on board ship or inland ship except ship's master, officer & crews. However child below one year age shall not be treated as passenger.
- n) "Passenger ship" means ship engaged in carrying more than 12 passengers having weathertight deck. And ship having more than one decks shall be included to this;

3. Implementation:

This rules shall be applicable in following cases.

- (a) New ship
- (b) Ship which gross tonnage has been changed and revised considerably as identified by the department
- (c) Existing ship for which shipowner has requested to apply new rules
- (d) All existing ships upto 100GT not later than 2 years from date of entry into force of this rules

- (e) All existing ships from 100GT to 500GT not later than 3 years from date of entry into force of this rules
- (f) All existing ships upto 500GT not later than 4 years from date of entry into force of this rules

4. Exemption :

This rule shall not be applicable to ships owned by Bangladesh defense services and any ship less than 6m length.

Chapter -2

General

5. Tonnage

- (1) Gross tonnage and net tonnage shall be included in ship's tonnage
- (2) Gross tonnage and net tonnage shall be calculated as per this rule
- (3) Gross tonnage and net tonnage for novel type(ships which structural construction is such that application of this rule is impractical or unwanted) of ships
- (4) Tonnage calculated as per this rules and certificate issued under rule 7 shall indicate the volume of enclosed spaces, shall not indicate weight or goods carrying capacity and it will be used to impose fees for ship registration, survey, entering into dock, taking out from dock, tariff calculation etc and use of inland ports & channels and similar application.

6. Tonnage measurement authority:

Gross tonnage and net tonnage shall be defined by the department and administration can delegate such responsibility to recognized organization or person(s). However, department shall have to take full responsibility for defining gross tonnage and net tonnage in all cases.

7. Delivery of tonnage certificate:

- (1) Tonnage certificate to be issued to those ships which gross tonnage and net tonnage calculated as per this rule
- (2) Delegated organization or person by administration or principal officer shall issue certificate as per sub rule (1)
- (3) Tonnage certificate format shall be as per appendix 1

8. Cancellation of Certificates

If changes in general arrangement, structure, capacity, use of spaces & certified passenger number as recorded in registry certificate, ship's load line or approved draft occurred such that gross tonnage or net tonnage shall have to be increased and ownership changed then tonnage certificate become invalid unless any provision in the rule and certificate shall stand cancelled.

9. Inspection

- (1) Engineer & Ship surveyor or Inspector from Administration or any person delegated by principal officer within jurisdiction of this rule shall be authorized to board the vessel at any time for inspection and such inspection shall be aimed to do followings:
 - (a) If ship has been issued with a valid tonnage certificate
 - (b) The data recorded on the tonnage certificate are same as principal dimensions and data of the ship
 - (c) If it reveals during inspection that there are deviation in entries on the tonnage certificate for which gross tonnage & net tonnage need to be increased. In such cases, re measurement shall be done as per this rule and new tonnage certificate shall be issued cancelling existing certificate.

Chapter – 3

10. Definitions

For determining gross tonnage and net tonnage, the definition of terms used shall as under if nothing is contrary to meaning, subject or reference of this rule:

- (1) "Upper deck" means uppermost weather deck, which has permanent weather tight closing arrangement to all openings on deck and watertight closing arrangement for opening at sides. The continuous extended deck upto lowest level of uppermost deck and continuous deck parallel to uppermost deck shall also be considered as upper deck.
- (2) "Moulded depth"
 - (a) "Moulded depth" means vertical distance from top of keel plate to inner side of upper deck at side. In case of midship lower part construction is hollow groove type or in case of thick girder fitted, in such cases measurement shall be taken from line of keel plate meeting the bottom plate.

- (b) For ship with round gunwale, moulded depth shall be from cross section of moulded depth lines of decks and side shell plate where lines are extended that the gunwale design seems to angular.
- (c) Where upper decks are with steps and raised part of deck is higher than point from where moulded depth to be measured, in such case moulded depth shall be measured from parallel reference line drawn from below of raised deck .
- (3) “ Breadth” means highest breadth measured from outside of side shell at midship for ships with metallic shell.
- (4) “Enclosed space” means spaces enclosed by ship’s shell, deck & bottom.
- (5) Despite details of para(4) of this rule, space mentioned in this para & para (b) & (c) of sub rule(2) shall be deducted and “deducted spaces” shall not be included in enclosed space if at least one conditions of following three conditions not fulfilled:
- Racks or other arrangement made for storing goods or items
 - Arrangement made to close the open space by some means
 - Provision of possible arrangement kept during construction to close similar open spaces
- (a) i) This rule shall be applicable for deducting following spaces
- Except curtain plate of upto 25mm for deck beams at side
 - Any space of raised part against extended open space at side from deck to deck where width of such space is more than 90% of breadth of open deck or line at same distance or enclosed space between parallel line of open area(appendix 2, sketch 1)
- ii) Where width of any space is less than 90% of breadth of deck for any reason other than outer plate become thinner, then only volume of space between line of open deck and where width of enclosed space become less than 90% of open deck shall be deducted from enclosed space(Appendix 2 sketch 2,3,& 4)
- iii) Where space between two space is open without any fence or railing, then deduction of one or both space as per sub para (a)(i) & (a)(ii) shall not be applicable if such separation space is less than 50% of deck in that location.
- (b) Space under upper most deck may be fitted with rail at ship’s side or top cover & curtain plate or vertical pillar other than essential pillars subject to height/distance of such rails or covers & curtain plate is .75m or less than one third height of that space(Appendix 2 Sketch 7)
- (c) If more than one enclosed space constructed side by side at opposite side open space which are either .75m or one third of space height and such

construction is kept at one side of open space then deducted from the space shall be limited to half of deck breadth at open space.(appendix 2 sketch 8)

- (d) Any space just under upper deck area free of any fitting/installations: Subject to such free space shall be open to atmosphere and deducted space from enclosed space shall be limited to volume of free space.(appendix 2 Sketch 9)
- (e) Any open compartment on top of any installation within it's boundary having no closing arrangement and extended from one side to other side of deck subject to inside breadth is not larger than opening and extension of construction shall not be larger than twice it's opening.(appendix 2 Sketch 10)
- (6) Enclose spaces defined for discharge of goods which included in calculation of gross tonnage shall be included for calculation of net tonnage. Such space shall be permanently marked as cargo compartment and these markings shall be in a easily sighted location and letter height is not less than 100mm
- (7) Weathertight means there will be no water ingress in any weather condition.

11. Gross Tonnage

Gross tonnage of any ship shall be determined as per following formulae:

$$GT = K1V$$

Where V is total volume of all enclosed spaces of ship in cubic meter

$$K1 = 0.2 + 0.02 \log_{10} v \text{ (or as per table in appendix 3)}$$

12. Net Tonnage

- (1) Net tonnage of any ship shall be determined as per following formulae

$$NT = K2Vc (4d/3D)^2 + K3(N1 + N2/10)$$

(a) If value of $(4d/3D)^2$ is >1 it will not be acceptable

(b) If value of $K2Vc (4d/3D)^2$ is $<0.25GT$, it will not be acceptable

(c) $NT < 0.30GT$ shall not be acceptable and where total cargo space in Cubic meter

$$K2 = 0.2 + 0.02 \log_{10} Vc \text{ (or as per table in appendix 3)}$$

$$K3 = 1.25 \frac{GT + 10.000}{10.0000}$$

D = Moulded depth in meters at midship as defined in rule 10

d = Moulded draft in meters at midship

N1 = Number of passengers in cabins with less than 8 berths

N2 = Number of other passengers

N1 + N2 = Total number of passengers ship is certified to carry as per survey certificate. Where N1 + N2 is less than 13 than N1 & N2 shall be considered as 0.

GT = Determined gross tonnage of ship as per rule 11

- (2) Moulded draft as defined in sub rule(1) of this rule shall be similar to any of following drafts
- (a) Ships for which Inland Ship(free board) rules 2001 applicable, corresponding smooth water load line draft
 - (b) Passenger ships for which Inland Ship(free board) rules 2001 applicable, corresponding defined deepest subdivision load line draft
 - (c) For other ships, 75% of moulded draft at midship as defined in rule 10(2)

13. Changes of Net Tonnage

- (1) When ship's data like V, Vc, d, N1 , N2 are changed as defined in rule 11 & 12 and which cases net tonnage increases for such changes as per rule 12, in those cases net tonnage of ship shall be applicable as per new specification.
- (2) Ship for which load line applicable as mentioned in para 2(a) & 2(b) of rule 12 simultaneously, then only one tonnage as per rule 12 shall be assigned or considered as appropriate load line assigned for inland water route where ship is trading
- (3) When ship's data like V, Vc, d, N1 , N2 are changed as defined in rule 11 & 12 or load line is changed as per sub rule(2) of this rule due change of inland water route where ship is trading and net tonnage decreases for such changes as per rule 12, in those cases new certificate shall not be issued before 12 months from the date of issue of existing certificate. It is to note that if there is major changes like removal of ships structure in the opinion of principal officer then this sub rule shall not be applicable.

14. Calculation of Volume

- (1) Volume included in gross tonnage & net tonnage for ships built with metallic materials, spaces between outer hull or internal spaces between boundary plates regardless of insulation fittings or other similar fittings and for ships built with other materials, spaces between outside hull or internal spaces between boundary plates shall be calculated.
- (2) Attached space volume shall be included to total volume
- (3) Volume of spaces open to water may be excluded from total volume

15. Measurement and Calculation

- (1) All measurement upto nearest centimeter shall be used to calculate volume
- (2) Volume shall be calculated as per generally accepted procedure for any particular space and correctly for acceptance by the department
- (3) Calculation shall be sufficiently detailed so that it can be verified easily.

16. Use

Defined gross tonnage and net tonnage for inland ships as per this rule shall be treated as basis of relation to ship's parameter or ship's correct size or usable capacity. If it is used in inland ship(safety) rule, it will be basis of Government, corporations and other agencies tariffs. It shall carefully checked while using registered net & gross tonnage, which parameter is more appropriate to use based on it's operating pattern.

Government of Peoples Republic of Bangladesh
 Tonnage Measurement Certificate for Inland Ship
 (Office Seal)

Refer to Certification rule 7(3) under Inland Shipping(Tonnage measurement)
 Rules, 2001

Name of Ship	Registration Number	Port of Registry	Date

* Date on which keel laid or ship was at similar stage of construction, rule 2(f), or date on which major modification or conversion has been done rule 2(j).

Main Dimensions

Length Rule 2(k)	Breadth Rule 10(3)	Moulded depth from keel to upper deck at midship Rule 10(2)

Ship's Tonnage :

Gross Tonnage

Net Tonnage

This is to certify that Tonnage of subject ship has been calculated as per Inland Shipping (Tonnage Measurement) Rules, 2001.

.....
 Place of issue of Certificate

.....
 Date of issue of Certificate

.....
 Signature of Certificate issuer
 &
 Seal

The undersigned declares that self has been duly authorized by the Principal Officer, Inland ship safety administration(ISSA) to issue this certificate

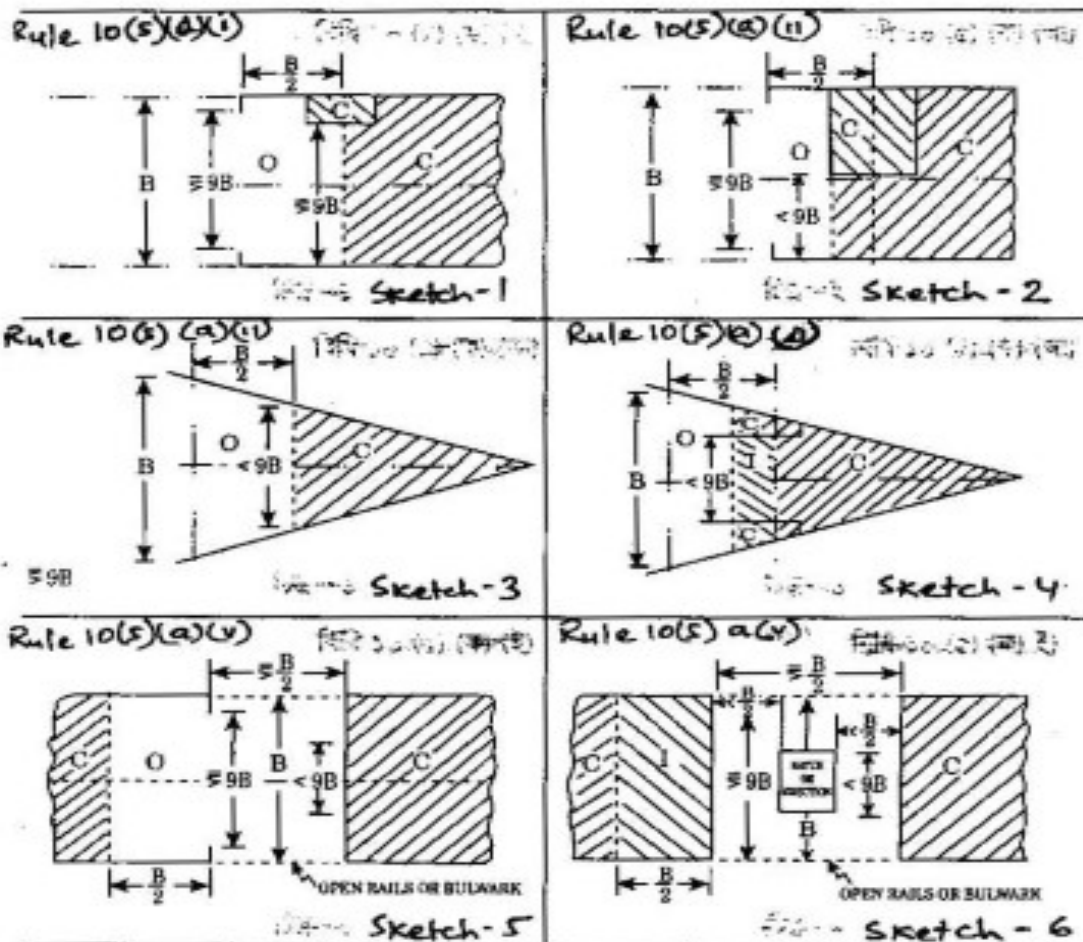
Appendix – 1

Spaces included for tonnage					
Gross Tonnage			Net Tonnage		
Name of measured place	Location	Length	Name of measured place	Location	Length
			Number of Passengers Rule 12(1)		
			Number of passengers in cabins having not more than 8 berths 		
			Number of other passengers: 		
Spaces deducted/excluded Rule 10(5) Spaces into which above listed spaces are enclosed and deducted spaces included from above listed spaces shall be marked with(*)			Moulded Draft Rule 12(2)		
Date & Place of Initial Measurement					
Date & Place of recent past remeasurement					
Remarks:					

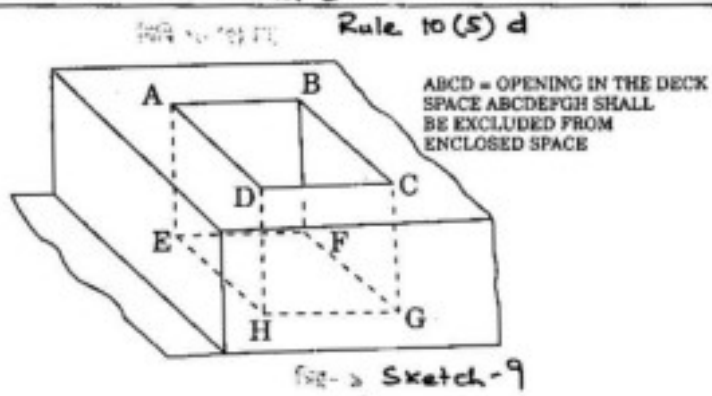
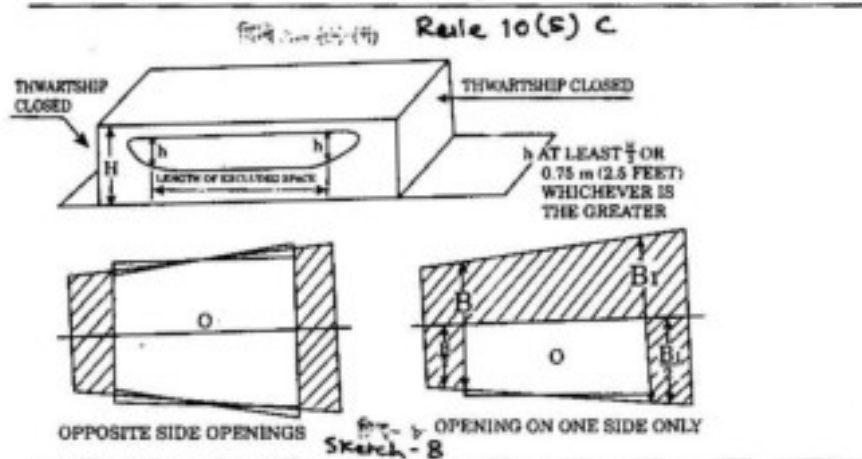
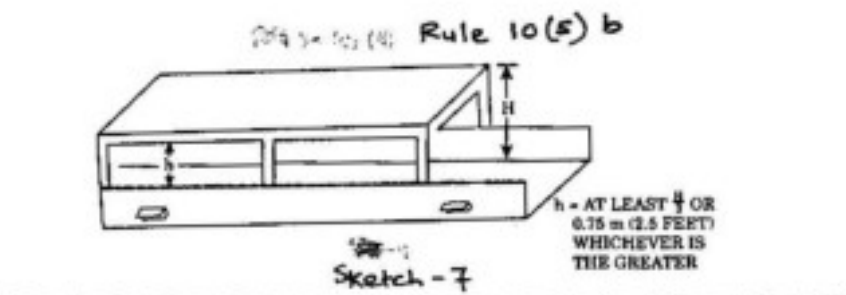
Appendix -2
 Sketches mentioned in rule 10(5)

- O - Excluded/deducted spaces
 - C - Enclosed spaces
 - I - Spaces considered as enclosed space.(Areas of hatches shall be treated as enclosed space)
 - B - Breadth of open deck area
- Breadth of ship with round paneling shall be measured as per sketch 11

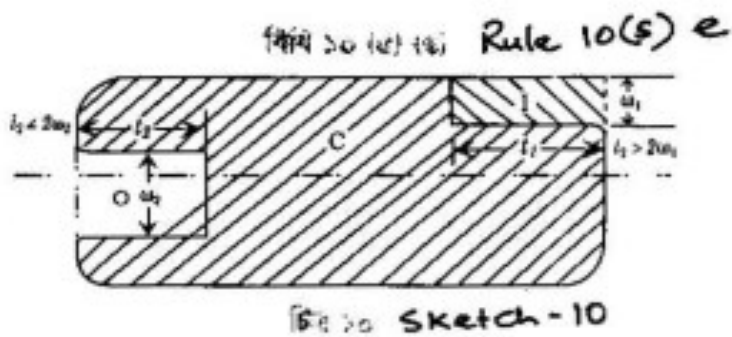
Sketches



Appendix -2
 Sketches mentioned in rule 10(5)

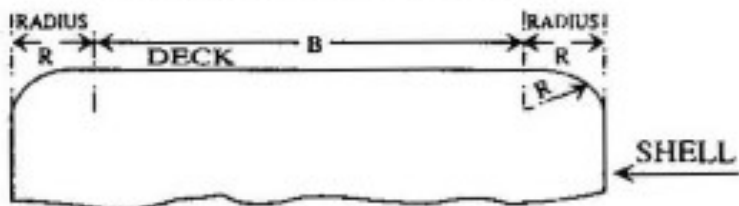


Appendix -2
 Sketches mentioned in rule 10(5)



SHIPS WITH ROUNDED GUNWALES

গোলাকার উপরিভাগ পার্শ্বদেশ বিশিষ্ট জাহাজ



বিঃ ১১ Sketch-11

Appendix -3

K1 or K2 are as mentioned in rule 11 & 12(1)

V or Vc = Cubic meter volume

V or Vc	K1 or K2	V or Vc	K1 or K2	V or Vc	K1 or K2	V or Vc	K1 or K2
10	0.2200	45000	0.2931	330000	0.3104	670000	0.3165
20	0.2260	50000	0.2940	340000	0.3106	680000	0.3166
30	0.2295	55000	0.2948	350000	0.3109	690000	0.3168
40	0.2320	60000	0.2956	360000	0.3111	700000	0.3169
50	0.2340	65000	0.2963	370000	0.3114	710000	0.3170
60	0.2356	70000	0.2969	380000	0.3116	720000	0.3171
70	0.2369	75000	0.2975	390000	0.3118	730000	0.3173
80	0.2381	80000	0.2981	400000	0.3120	740000	0.3174
90	0.2391	85000	0.2986	410000	0.3123	750000	0.3175
100	0.2400	90000	0.2991	420000	0.3125	760000	0.3176
200	0.2460	95000	0.2996	430000	0.3127	770000	0.3177
300	0.2495	100000	0.3000	440000	0.3129	780000	0.3178
400	0.2520	110000	0.3008	450000	0.3131	790000	0.3180
500	0.2540	120000	0.3016	460000	0.3133	800000	0.3181
600	0.2556	130000	0.3023	470000	0.3134	810000	0.3182
700	0.2569	140000	0.3029	480000	0.3136	820000	0.3183
800	0.2581	150000	0.3035	490000	0.3138	830000	0.3184
900	0.2591	160000	0.3041	500000	0.3140	840000	0.3185
1000	0.2600	170000	0.3046	510000	0.3142	850000	0.3186
2000	0.2660	180000	0.3051	520000	0.3143	860000	0.3187
3000	0.2695	190000	0.3056	530000	0.3145	870000	0.3188
4000	0.2720	200000	0.3060	540000	0.3146	880000	0.3189
5000	0.2740	210000	0.3064	550000	0.3148	890000	0.3190
6000	0.2756	220000	0.3068	560000	0.3150	900000	0.3191
7000	0.2769	230000	0.3072	570000	0.3151	910000	0.3192
8000	0.2781	240000	0.3076	580000	0.3153	920000	0.3193
9000	0.2791	250000	0.3080	590000	0.3154	930000	0.3193
10000	0.2800	260000	0.3083	600000	0.3156	940000	0.3194
15000	0.2835	270000	0.3086	610000	0.3157	950000	0.3195
20000	0.2860	280000	0.3089	620000	0.3158	960000	0.3196
25000	0.2880	290000	0.3092	630000	0.3160	970000	0.3197
30000	0.2895	300000	0.3095	640000	0.3161	980000	0.3198
35000	0.2909	310000	0.3098	650000	0.3163	990000	0.3199
40000	0.2920	320000	0.3101	660000	0.3164	1000000	0.3200

Note : Intermediate value of V or Vc can be found by linear interpolation of K1 or K2

By order of the President

Md Nasir Uddin
Deputy Secretary(Shipping)