L.N. 102 of 1964

## NIGERIAN COLLEGE OF ARTS, SCIENCE AND TECHNOLOGY (TRANSFER) ACT, 1962

(1962, No. 3)

### Nigerian College of Arts, Science and Technology (Abolition of Northern Nigeria Branch) Order, 1964

*Commencement : 1st August*, 1964

**In exercise of the powers conferred by subsection (2) of Section 4 of the Nigerian College of Arts, Science and Technology (Transfer) Act, 1962, and of all other powers enabling me in that behalf, I hereby make the following Order—**

1. The Northern Nigerian Branch of the Nigerian College of Arts, Science and Technology shall cease to exist and the College Council and any remaining Branch Committee or other committees or Board of the College shall be abolished on the 1st day of August, 1964. Commencement.

2. This Order may be cited as the Nigerian College of Arts, Science and Technology (Abolition of Northern Nigeria Branch) Order, 1964. Citation.

MADE this 23rd day of July, 1964.

AJA NWACHUKU,
*Federal Minister of Education*

---

L.N. 103 of 1964

## CUSTOMS AND EXCISE MANAGEMENT ACT, 1958

(No. 55 OF 1958)

### Open General Import Licence (Japan) No. 3 of 1959 Amendment Notice, 1964

*Commencement : 17th September*, 1964

**In exercise of the powers conferred by section 4 of the Imports Prohibition Order, 1959, the Import Licensing Authority hereby amends the Schedule to the Open General Import Licence referred to herein.**

1. The Schedule to the Open General Import Licence (Japan) No. 3 of 1959 is hereby amended by the addition of the following item— Amendment of L.N. 238 of 1959 L.N. 105 of 1963.

| | *Import Group* | *Item No.* |
|---|---|---|
| "25. Lemon Fruit .. .. | 051 | 90" |

Citation and application.

2. This notice may be cited as the Open General Import Licence (Japan) No. 3 of 1959 Amendment Notice, 1964 and shall apply throughout the Federation.

MADE this 17th day of September, 1964.

J. B. ELUMEZE,
*Import Licensing Authority,*
*Federal Ministry of Commerce and Industry*

EXPLANATORY NOTE

The effect of this amendment is that specific import licence is now required for the importation of fresh lemon fruits into Nigeria while lemon juice and lemon barely water may be imported without specific import licence.

---

**L.N. 104 of 1964**

CUSTOMS AND EXCISE MANAGEMENT ACT, 1958
(No. 55 OF 1958)

## Open General Import Licence (Dollar Area) No. 4 of 1959 Amendment Notice, 1964

*Commencement : 17th September*, 1964

**In exercise of the powers conferred by Section 4 of the Imports Prohibition Order, 1959, the Import Licensing Authority hereby amends the Second Schedule to the Open General Import Licence referred to herein.**

Amendment of L.N. 239 of 1959.

1. The Second Schedule to the Open General Import Licence (Dollar Area) No. 4 of 1959 is hereby amended by the addition of the following item—

| | *Import Group* | *Item No.* |
|---|---|---|
| "37 Lemon, Fruit .. .. | 051 | 90" |

Citation and application.

2. This notice may be cited as the Open General Import Licence (Dollar Area) No. 4 of 1959 Amendment Notice, 1964 and shall apply throughout the Federation.

MADE in Lagos this 17th day of September, 1964.

J. B. ELUMEZE,
*Import Licensing Authority,*
*Federal Ministry of Commerce and Industry*

EXPLANATORY NOTE

The effect of this amendment is that specific import licence is now required for the importation of fresh lemon fruits into Nigeria while lemon juice and lemon barely water may be imported without specific import licence.

L.N. 105 of 1964

CUSTOMS AND EXCISE MANAGEMENT ACT, 1958
(No. 55 OF 1958)

## Open General Import Licence (Hong Kong) No. 1 of 1963 (No. 2) Amendment Notice, 1964

*Commencement : 17th September*, 1964

**In exercise of the powers conferred by section 4 of the Imports Prohibition Order, 1959, the Import Licensing Authority hereby amends the Schedule to the Open General Import Licence referred to herein.**

1. The Schedule to the Open General Import Licence (Hong Kong) No. 1 of 1963 is hereby amended by the deletion of the following item — Amendment of L.N. 121 of 1963 and L.N. 85 of 1964.

| | *Import Group* | *Item No.* |
|---|---|---|
| "24. Lemon Fruit .. .. | 051 | 90" |

2. This notice may be cited as the Open General Import Licence (Hong Kong) No. 1 of 1963 Amendment (No. 2) Notice, 1964 and shall apply throughout the Federation. Citation and application.

MADE this 17th day of September, 1964.

J. B. ELUMEZE,
*Import Licensing Authority,*
*Federal Ministry of Commerce and Industry*

EXPLANATORY NOTE

The effect of this amendment is that specific import licence is now required for the importation of fresh lemon fruits into Nigeria while lemon juice and lemon barely water may be imported without specific import licence.

SC411/T.9

---

L.N. 106 of 1964

CUSTOMS AND EXCISE MANAGEMENT ACT, 1958
(No. 55 OF 1958)

## Open General Import Licence (All Countries) No. 1 of 1964 Amendment Notice, 1964

*Commencement : 17th September*, 1964

**In exercise of the powers conferred by Section 4 of the Imports Prohibition Order, 1959, the Import Licensing Authority hereby amends the Second Schedule to the Open General Import Licence referred to herein.**

1. The Second Schedule to the Open General Import Licence (All Countries) No. 1 of 1964 is hereby amended by the deletion of the following item— Amendment of L.N. 56 of 1964.

| | *Import Group* | *Item No.* |
|---|---|---|
| "22. Lemons .. .. .. .. | 053 | 50" |

and addition of the following item—

| | | |
|---|---|---|
| "22. Lemon, Fruit .. .. .. | 051 | 90" |

Citation and application.

2. This Notice may be cited as the Open General Import Licence (All Countries) No. 1 of 1964 Amendment Notice, 1964 and shall apply throughout the Federation.

MADE in Lagos this 17th day of September, 1964.

J. B. ELUMEZE,
*Import Licensing Authority,*
*Federal Ministry of Commerce and Industry*

EXPLANATORY NOTE

The effect of this amendment is that specific import licence is now required for the importation of fresh lemon fruits into Nigeria while lemon juice and lemon barely water may be imported without specific import licence.

---

**L.N. 107 of 1964**

## CUSTOMS AND EXCISE MANAGEMENT ACT, 1958
(No. 55 OF 1958)

## Open General Import Licence (Netherlands) No. 2 of 1964 Amendment (No. 2) Notice, 1964

*Commencement : 17th September*, 1964.

**In exercise of the powers conferred by section 4 of the Imports Prohibition Order, 1959, the Import Licensing Authority hereby amends the Schedule to the Open General Import Licence (Netherlands).**

Amendment of L.N. 47 of 1964 and L.N. 86 of 1964.

1. The Schedule to the Open General Import Licence (Netherlands) No. 2 of 1964 is hereby amended by the deletion therefrom of the following item—

| | *Import Group* | *Item No.* |
|---|---|---|
| "22 Lemon .. .. .. .. | 053 | 50 |

and the substitution thereto of the following item—

| | | |
|---|---|---|
| "22 Lemon, Fruit .. .. | 051 | 90 |

Citation and application.

2. This notice may be cited as the Open General Import Licence (Netherlands) No. 2 of 1964 Amendment (No. 2) Notice, 1964 and shall apply throughout the Federation.

MADE this 17th day of September, 1964.

J. B. ELUMEZE,
*Import Licensing Authority,*
*Federal Ministry of Commerce and Industry*

EXPLANATORY NOTE

The effect of this amendment is that specific import licence is now required for the importation of fresh lemon fruits into Nigeria while lemon juice and lemon barely water may be imported without specific import licence.

# THE MERCHANT SHIPPING (LOAD LINE) RULES, 1964

## ARRANGEMENT OF RULES

Miscellaneous Provisions



PART VI.—COMPUTATION OF FREEBOARDS FOR STEAMERS



Strength



Superstructures



Appliances for Closing Access Openings in Bulkheads at ends of Detached Superstructures



Effective Length of Detached Superstructures



Sheer



Round of Beam

Computation of Freeboard



PART X.—FREEBOARDS FOR SHIPS OF SPECIAL TYPE



PART XI.—LOAD LINES



PART XII.—LOAD LINES FOR STEAMERS PLYING ON INLAND WATERS ONLY

L.N. 108 of 1964

# MERCHANT SHIPPING ACT, 1962
(1962, No. 30)

## The Merchant Shipping (Load Line) Rules, 1964

*Commencement : 17th September*, 1964

**In exercise of the powers conferred by section 201 of the Merchant Shipping Act, 1962, the Federal Minister of Transport hereby makes the following Rules :—**

### PART I.—GENERAL

Citation:.

1. These Rules may be cited as the Merchant Shipping (Load Line) Rules, 1964.

Application.

2. These Rules shall apply to all Nigerian ships subject to the provisions of sections 202 and 229 of the Act and also to all other ships subject to the provisions of Chapter 36 of the Act.

Interpretation.

3. In these Rules unless the context otherwise requires—

"Amidships" means the middle of the length of the summer load water line as defined in Rule 41 ;

"Assigning Authority", means the Minister, Lloyd's Register of Shipping, the British Committee of the Bureau Veritas, or the British Technical Committee of the American Bureau of Shipping ;

"Conditions of Assignment" means the conditions of assignment set out in Part V of these Rules ;

"Freeboard Deck" means the uppermost complete deck having permanent means of closing all openings in weather portions of the deck in accordance with Rules 17 to 24, and in flush deck ships and ships having detached superstructures means the upper deck. In ships having discontinuous freeboard decks within superstructures which are not intact, or which are not fitted with Class 1 closing appliances as defined in Rule 52, the lowest line of the deck below the superstructure deck shall be deemed to be the freeboard deck ;

"Flush Deck Ship" means a ship which has no superstructure on the freeboard deck ;

"Load Line Ship" means any sea-going ship which is not a ship to which rules made or deemed to have been made pursuant to section 202 of the Act apply, or in respect of which a certificate issued under subsection 3 of that section is in force.

"Special Steamer Freeboard" means a freeboard assigned under Part X of these Rules ;

"Steamer" includes all ships having sufficient means for mechanical propulsion, and for the purposes of these Rules a lighter, barge or other ship without independent means of propulsion, when towed, is deemed to be a steamer ;

"Superstructure" means a decked structure on the freeboard deck extending from side to side of the ship, and includes a "raised quarter deck" and "superstructure deck" means the deck forming the top of a superstructure ;

"Surveyor" means a Surveyor appointed by the assigning authority.

"Tanker" includes all steamers specially constructed for the carriage of liquid cargoes in bulk ;

"Tanker Freeboard" means a freeboard assigned under Part IX of these Rules ;

"Timber Cargo Regulations" means any regulations, for the time being in force under section 225 of the Act ;

"Timber Deck Cargo" means a cargo of timber carried on an uncovered part of a freeboard or superstructure deck, but does not include a cargo of wood pulp or similar substance ;

"Timber Freeboard" means a freeboard assigned under Part VIII of these Rules.

Revocation.

4. All references to Load Lines in the following enactments are hereby revoked—

(*a*) The Survey of Vessels (Sea-going) Regulations, 1959, and

(*b*) The Survey of Vessels (Inland Waters) Regulations, 1959.

## PART II.—SURVEYS

Application for load line certificate.

5.—(1) Every application for the issue or renewal of a load line certificate shall be made by or on behalf of the owner of the ship to an Assigning Authority.

(2) Every application for the issue or renewal of a load line certificate in respect of timber freeboards shall be accompanied by such plans as the Assigning Authority may require, showing the fittings and arrangements for stowing and securing timber deck cargoes in accordance with Part VIII of these Rules and any regulations which may be made under section 225 (1) of the Merchant Shipping Act, 1962.

(3) Every application for the issue or renewal of a load line certificate in respect of tanker freeboards shall be accompanied by such plans as the Assigning Authority may require, showing the fittings and arrangements provided or to be provided for the purpose of complying with Part IX of these Rules.

(4) On every such application, there shall be paid by the owner the prescribed fee as laid down in the Merchant Shipping (Fees) Regulations, 1963.

Load Line Survey.

6.—(1) The Assigning Authority shall upon receipt of the application and of the prescribed fee cause the ship to be surveyed by a qualified surveyor as hereinafter provided.

(2) The surveyor shall survey the ship with a view to satisfying himself—

(*a*) that the material and workmanship of all parts of the hull of the ship are in all respects satisfactory and efficient and that having regard to the period for which the load line certificate is to be issued or renewed the hull is in good condition internally and externally ;

(*b*) that if the keel of the ship was laid on or after 1st July, 1932, she complies with the Conditions of Assignment to the extent thereby required in her case ; or if the keel was laid before that date, she complies with the Conditions of Assignment in principle and also in detail so far as is reasonable and practicable having regard to the efficiency of the protection of openings, the guard rails, the freeing ports, and the means of access to the crew's quarters provided by the arrangements, fittings and appliances existing on the ship at the time of survey ;

(*c*) in the case of an application for the issue or renewal of a certificate in respect of timber freeboards; that the ship also complies with the provisions of Part VIII of these Rules to the extent thereby required in her case;

(*d*) in the case of an application for the issue or renewal of a certificate in respect of tanker freeboards, that the ship also complies with the provisions of Part IX of these Rules to the extent thereby required in her case; and

(*e*) in the case of an application for the issue or renewal of a certificate in respect of special steamer freeboards, that the ship also complies with the provisions of Part X of these Rules to the extent thereby required in her case.

(3) On the completion of the survey the surveyor shall forward to the Assigning Authority a report stating the result of the survey and containing such particulars of the ship as are required by the Assigning Authority to enable them to assign the appropriate freeboards to the ship.

(4) On receipt of the surveyor's report the Assigning Authority, if satisfied that the ship complies with the appropriate provisions of these Rules to the extent thereby required in her case, shall assign freeboards to the ship, in accordance with such of these Rules as are applicable to the ship, and shall furnish the owner with particulars as to the nature of the load lines and of the position in which the deck line and the load lines are to be marked on the ship.

Annual Survey.

7.—(1) Every application for the survey of a ship under subsection (7) of section 208 of the Act for the purpose of seeing whether her load line certificate should remain in force shall be made by or on behalf of the owner to the Assigning Authority by whom the certificate was issued.

(2) There shall be paid in respect of such survey the prescribed fee.

(3) The Assigning Authority shall, upon receipt of the application and of the prescribed fee, cause the ship to be surveyed by a qualified surveyor.

(4) The surveyor shall survey the ship with a view to satisfying himself -

(*a*) that the fittings and appliances for the protection of openings, the guard rails, the freeing ports and the means of access to the crew's quarters have been maintained on the ship in as effective a condition as they were in when the certificate was issued; and

(*b*) that no material alterations have taken place in the hull or superstructures of the ship which affect the positions of the load lines.

(5) Upon completion of the survey to the satisfaction of the surveyor, he shall forward a report thereon to the Assigning Authority and endorse on the certificate a statement that the survey of the ship has been so completed.

## Part III.—Load Line Marks

Marking.

8. On receiving from the assigning Authority the particulars as to the deck line and load lines as provided in Rule 6, the owner shall cause to be marked on each side of the ship, to the satisfaction of the surveyor, the appropriate marks in accordance with this Part of these Rules.

Method of marking.

9. The disc, lines and letters described in Rule 10 shall be marked in such manner as in the surveyor's opinion will make them plainly visible. They shall be painted in white or yellow on a dark ground or in black on a light ground, and shall also be carefully cut in or centre-punched on the sides of iron and steel ships, and on wood ships shall be cut into the planking for at least one-eighth of an inch.

Marks on steamers.

10. A steamer shall be marked on each side with a deck line and load lines as follows :—

(*a*) A deck line which shall be a horizontal line twelve inches in length and one inch in breadth marked amidships with its upper edge passing through the point where the continuation outwards of the upper surface of the freeboard deck intersects the outer surface of the shell. (*See* figure 1). Where the deck is partly sheathed amidships, the upper edge of the deck line shall pass through the point where the continuation outwards of the upper surface of the actual sheathing at amidships intersects the outer surface of the shell.

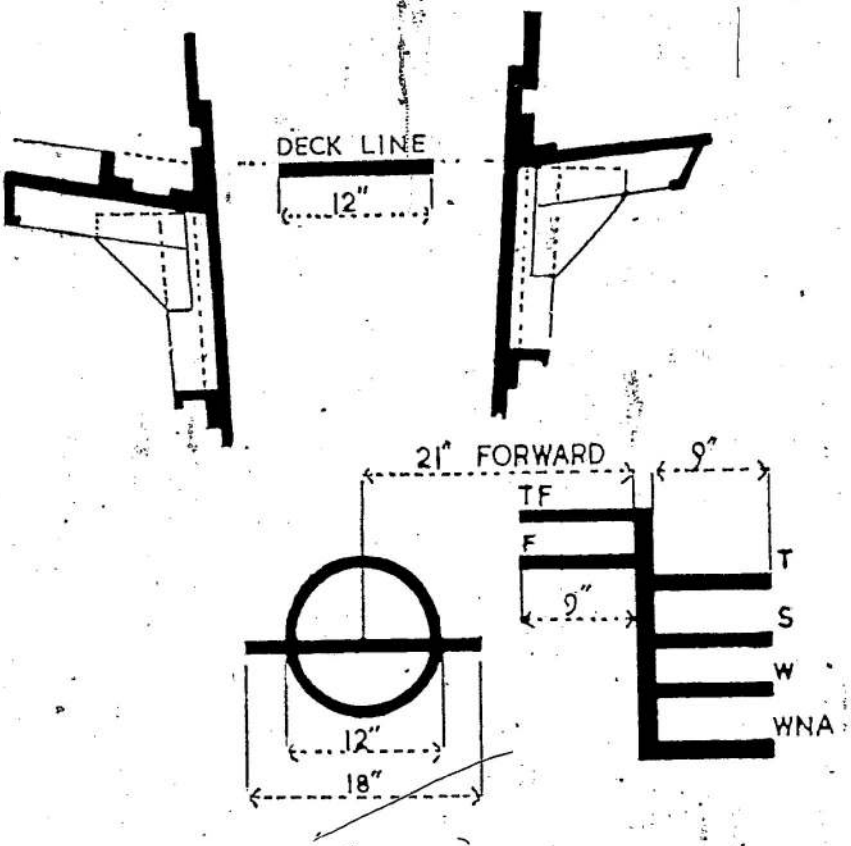



FIGURE 1.

Timber load lines.

(*b*) A load line disc twelve inches in diameter intersected by a horizonal line eighteen inches in length and one inch in breadth, the upper edge of which passes through the centre of the disc. The disc shall be marked amidships below the deck line.

(*c*) Horizontal lines nine inches in length and one inch in breadth which extend from, and are at right angles to, a vertical line 21 inches forward of the centre of the disc (*see* figure 1) and which indicate the maximum depth to which the ship may be loaded in different circumstances and in different seasons. These lines are as follows :—

*The Summer Load Line* indicated by the upper edge of the line which passes through the centre of the disc and also by the upper edge of a line marked S.

*The Winter Load Line* indicated by the upper edge of a line marked W.

*The Winter North Atlantic Load Line* indicated by the upper edge of a line marked WNA. This line shall not be marked on a steamer over 330 feet in length not being a tanker or a steamer of special type to which Rule 13 applies.

*The Tropical Load Line* indicated by the upper edge of a line marked T.

*The Fresh Water Load Line* in summer indicated by the upper edge of a line marked F.

*The Tropical Fresh Water Load Line* indicated by the upper edge of a line marked TF.

Marks on sailing ships.

11. A sailing ship shall be marked on each side of the ship with a deck line and a Winter North Atlantic load line as provided in Rule 10 and with a Fresh Water Load Line indicated by the upper edge of a line marked F. (*See* figure 2).

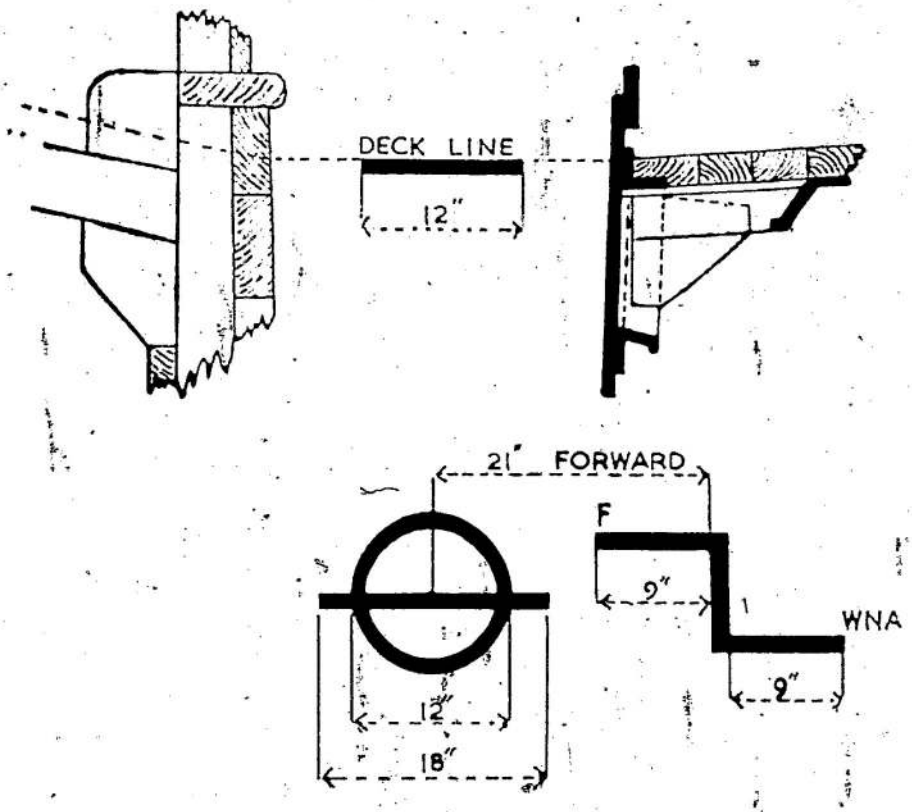



FIGURE 2

Timber load lines.

12. Every steamer to which timber load lines are assigned in accordance with Part VIII of these Rules shall be marked with the following lines in addition to the lines referred to in Rule 10 :—

Horizontal lines nine inches in length and one inch in breadth, which extend from, and are at right angles to, a vertical line marked twenty-one

inches abaft the centre of the disc (*see* figure 3) and which indicate the maximum timber load lines in different circumstances and in different seasons. These lines are as follows :—

*The Summer Timber Load Line* indicated by the upper edge of a line marked LS.

*The Winter Timber Load Line* indicated by the upper edge of a line marked LW.

*The Winter North Atlantic Timber Load Line* indicated by the upper edge of a line marked LWNA.

*The Tropical Timber Load Line* indicated by the upper edge of a line marked LT.

*The Fresh Water Timber Load Line* in summer indicated by the upper edge of a line marked LF.

*The Fresh Water Timber Load Line* in the Tropical Zone indicated by the upper edge of a line marked LTF.

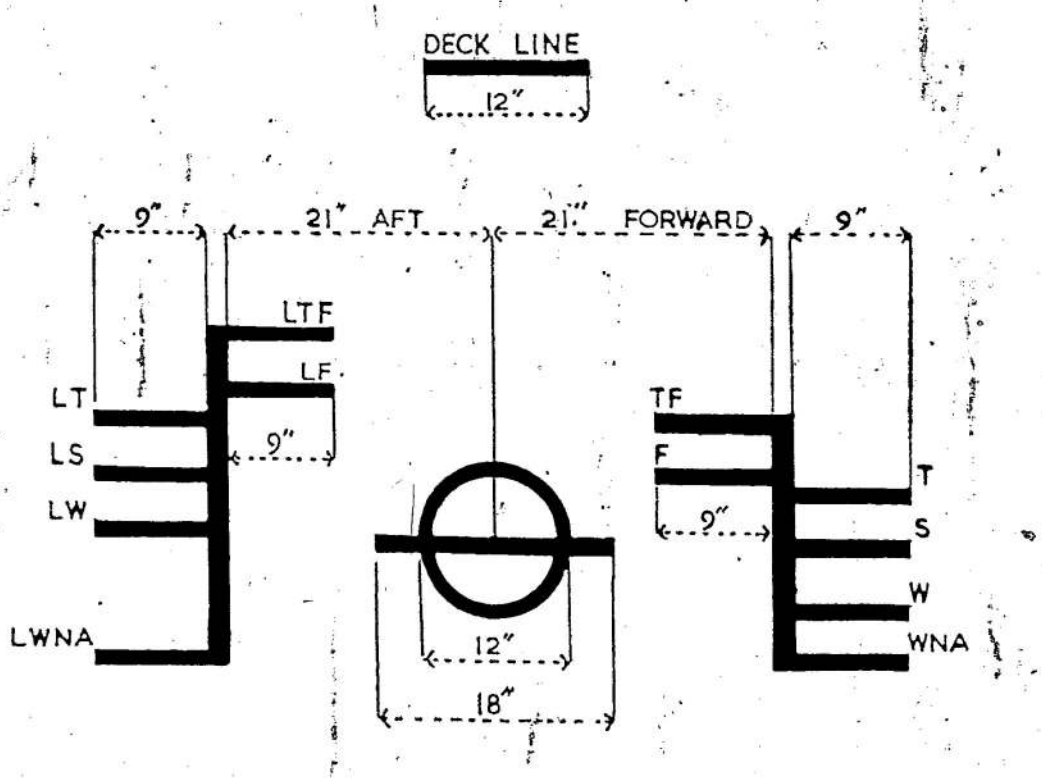



FIGURE 3.

Tankers and Special Type Steamers.

13. Every tanker to which a tanker freeboard is assigned in accordance with Part IX of these rules and every steamer of special type to which a freeboard is assigned in accordance with Part X of these Rules shall be marked with the lines referred to in Rule 10 provided that the Winter North Atlantic Load Line shall always be marked whatever the length of the steamer.

Marks of Assigning Authority.

14. For the purpose of indicating the name of the Assigning Authority by whom the freeboards have been assigned, letters measuring about 4½ inches by 3 inches may be marked alongside the disc and above the line through the centre of the disc.

## Part IV.—Certificates

Form and issue of load line certificates.

15. Every load line certificate in respect of freeboards assigned to a ship shall be issued by the Assigning Authority by whom those freeboards were assigned and shall be in such one of the forms set out in the Second Schedule to these Rules as is appropriate to the case, or in such other form substantially to the like effect as the Minister may from time to time direct.

Delivery of certificates.

16.—(1) On the Assigning Authority being satisfied that the ship has been marked to the surveyor's satisfaction as required by these Rules and that the prescribed fee has been paid, the certificate shall be delivered to the applicant with a certified copy thereof.

(2) A further certified copy of each certificate issued by an Assigning Authority other than the Minister, shall be sent to the Minister.

## Part V.—Conditions of Assignment

### Openings in Freeboard and Superstructure Decks

Hatchways not protected.

17. The construction and fitting of cargo and other hatchways in exposed positions on freeboard and superstructure decks shall be at least equivalent to the standards laid down in Rules 18 to 24.

Hatchway coamings.

18.—(1) The height of hatchway coamings on freeboard decks shall be at least 24 inches above the deck. The height of coamings on superstructure decks shall be at least 24 inches above the deck if situated within a quarter of the ship's length from the stem, and at least 18 inches if situated elsewhere.

(2) Coamings shall be of steel, shall be substantially constructed and, where required to be 24 inches high, shall be fitted with an efficient horizontal stiffener placed not lower than 10 inches below the upper edge, and with efficient brackets or stays from the stiffener to the deck, at intervals of not more than 10 feet.

Hatchway covers.

19.—(1) Covers to exposed hatchways shall be efficient, and where they are made of wood, the finished thickness shall be at least 2⅜ inches in association with a span of not more than 5 feet. The width of each bearing surface for wood hatchway covers shall be at least 2½ inches.

(2) The ends of the wood covers shall be protected by galvanised steel bands efficiently secured, except that this requirement shall not apply to wood covers in use before 1st January, 1947, but when in the opinion of the Assigning Authority the renewal of a wood cover becomes necessary, effect shall be given to this requirement.

Hatchway beams and fore-and-afters.

20. Where wood hatchway covers are fitted the hatchway beams and fore-and-afters shall be on the scantlings and spacing given in Table 1 in Appendix 1 to these Rules, where coamings 24 inches high are required, and as given in

Table 2 of the said Appendix where coamings 18 inches high are required. Angle bar mountings on the upper edge shall extend continuously for the full length of each beam. Wood fore-and-afters shall be steel shod at all bearing surfaces.

Carriers or sockets.

21. Carriers or sockets for hatchway beams and fore-and-afters shall be of steel at least $\frac{1}{2}$ inch thick, and shall have a width of bearing surface of at least 3 inches.

Cleats.

22.—(1) Strong cleats at least $2\frac{1}{2}$ inches wide shall be fitted at intervals of not more than 2 feet from centre to centre; the end cleats shall be placed not more than 6 inches from each corner of the hatchway.

(2) Cleats shall be of a pattern approved by the Assigning Authority and shall be set to fit the taper of the wedges:

Provided that these requirements shall not apply to any ship the keel of which was laid before 1st January, 1947.

Battens, wedges, and tarpaulins.

23.—(1) Battens and wedges shall be efficient and in good condition.

(2) Wedges shall be made from tough wood cut to a taper of 1 in 6 and shall not be less than $\frac{1}{2}$ inch thick at the toe;

Provided that these requirements shall not apply to any ship the keel of which was laid before 1st January, 1947.

(3) At least two tarpaulins in good condition, thoroughly waterproofed and of ample strength, shall be provided for each hatchway in an exposed position on freeboard and superstructure decks. The material of the tarpaulins shall be guaranteed free from jute, and the minimum weight of the material, before treatment, shall be 19 ozs. per square yard if to be tarred, 18 ozs. per square yard if to be chemically dressed or 16 ozs. per square yard for black oil dressing.

Security of hatchway covers.

24.—(1) Where the coamings are required to be 24 inches high—

(*a*) steel bars or other equipment shall be provided for efficiently and independently securing each section of hatchway covers after the tarpaulins are battened down;

(*b*) at all other hatchways in exposed positions on freeboard and superstructure decks, ring bolts or other fittings for lashings shall be provided; and

(*c*) where the hatchway covers extend over intermediate supports steel bars or their equivalent shall be fitted at each end of each section of the covers;

Provided that in the case of any ship the keel of which was laid before 1st January, 1947, the foregoing requirements of this Rule shall not apply unless in the opinion of the Assigning Authority compliance therewith would be reasonable and practicable.

(2) Where, by virtue of the proviso to paragraph (1) of this Rule, the foregoing provisions of the said paragraph (1) do not apply in the case of any ship, the following provisions shall apply—

(*a*) at all hatchways in exposed positions on the freeboard and superstructure decks, ring bolts or other fittings for lashings shall be provided;

(*b*) where the breadth of the hatchway exceeds 60 per cent of the breadth of the deck in the way of the hatchway and the coamings are required to be 24 inches high, fittings for special lashings shall be provided for securing the hatchway covers after the tarpaulins are battened down.

Closing arrangements, coamings.

25.—(1) Cargo, coaling and other hatchways in the freeboard deck within superstructures which are fitted with closing appliances less efficient than Class 1 but not less efficient than Class 2 shall have coamings at least 9 inches in height and closing arrangements as effective as those required for exposed cargo hatchways whose coamings are 18 inches high.

(2) Where the closing appliances are less efficient than Class 2, the hatchways shall have coamings at least 18 inches in height, and shall have fittings and closing arrangements as effective as those required for exposed cargo hatchways.

Machinery space openings. Freeboard and raised quarter deck.

26.—(1) Machinery space openings in exposed positions on freeboard and raised quarter decks shall be properly framed and efficiently enclosed by steel casings of ample strength. Doors in such casings shall be of steel, efficiently stiffened, permanently attached, and capable of being closed and secured from both sides. The sills of openings shall be at least 24 inches above the freeboard deck and at least 18 inches above the raised quarter deck.

(2) Fiddley, funnel and ventilator coamings shall be as high above the deck as is reasonable and practicable. Fiddley openings shall have strong steel covers permanently attached in their proper positions.

Machinery space openings. Superstructure decks other than raised quarter decks.

27.—(1) Machinery space openings in exposed positions on superstructure decks other than raised quarter decks shall be properly framed and efficiently enclosed by strong steel casings. Doors in such casings shall be strongly constructed, permanently attached, and capable of being closed and secured from both sides. The sill of the openings shall be at least 15 inches above superstructure decks.

(2) Fiddley, funnel and ventilator coamings shall be as high above the deck as is reasonable and practicable. Fiddley openings shall have strong steel covers permanently attached in their proper positions.

Machinery space openings, with closing appliances less than Class 1.

28. Machinery space openings in the freeboard deck within superstructures which are fitted with closing appliances less efficient than Class 1 shall be properly framed and efficiently enclosed by steel casings. Doors in such casings shall be strongly constructed, permanently attached and capable of being securely closed. The sills of the openings shall be at least 9 inches above the deck where the superstructures are closed by Class 2 closing appliances, and at least 15 inches above the deck where the closing appliances are less efficient than Class 2.

Flush bunker scuttles.

29.—(1) Flush bunker scuttles may only be fitted in superstructure decks, except in the case of small ships in special trades where they may be fitted in other positions by permission of the Assigning Authority.

(2) Such scuttles shall be of iron or steel, of substantial construction, with screw or bayonet joints. Where a scuttle is not secured by hinges, a permanent chain attachment shall be provided.

Companionways.

30. Companionways in exposed positions on freeboard decks and on decks of enclosed superstructures shall be of substantial construction. The sills of the doorways shall be of the heights specified for hatchway coamings in Rules 18 and 25. The doors shall be strongly constructed and capable of being closed and secured from both sides. Where the companionway is situated within a quarter of the ship's length from the stem, it shall be of steel and riveted to the deck plating.

Ventilators

31.—(1) Ventilators in exposed positions on freeboard and superstructure decks to spaces below freeboard decks or decks of superstructures which are intact or fitted with Class 1 closing appliances shall have coamings of steel, substantially constructed, and efficiently connected to the deck by rivets spaced four diameters apart centre to centre, or by equally effective means. The deck plating at the base of the coaming shall be efficeintly stiffened between the deck beams. The ventilator openings shall be provided with efficient closing arrangements.

(2) Where such ventilators are situated on the freeboard deck within a quarter of the ship's length from the stem, and the closing arrangements of the ventilators are of a temporary character, the coaming shall be at least 36 inches in height; in other exposed positions on the superstructure deck they are to be at least 30 inches in height. Where the coaming of any ventilator exceeds 36 inches in height, it shall be specially supported and secured.

Air pipes.

32. Where the air pipes to ballast and other tanks extend above freeboard or superstructure decks, the exposed parts of the pipes shall be of substantial construction; the height from the deck to the opening shall be at least 36 inches in wells on freeboard decks, 30 inches on raised quarter decks, and 18 inches on other superstructure decks. Efficient means shall be provided for closing the openings of the air pipes.

## Openings in the Sides of Ships

Gangway, cargo, coaling ports etc.

33. Openings in the sides of ships below the freeboard deck shall be fitted with watertight doors or covers which, with their securing appliances, shall be of sufficient strength.

Scuppers, and sanitary discharge pipes.

34.—(1) Discharges led through the ship's sides from spaces below the freeboard deck shall be fitted with efficient and accessible means for preventing water from passing inboard. Each separate discharge shall have either an automatic non-return valve with a positive means of closing it from a position above the freeboard deck, or two automatic non-return valves without positive means of closing, provided that the upper valve is situated so that it is always accessible for examination under service conditions. The positive action valve shall be readily accessible and is to be provided with means for showing whether the valve is open or closed.

(2) The foregoing provisions of this Rule shall apply to discharges from spaces within enclosed superstructures if, and to the extent that, the Assigning Authority consider necessary having regard to the type and location of the inboard ends of such openings.

(3) Where scuppers are fitted in superstructures not fitted with Class 1 closing appliances they shall have efficient means for preventing the accidental admission of water below the freeboard deck.

(4) Cast iron shall not be accepted for valve and discharges led through the ship's sides below the freeboard deck or through the sides of enclosed superstructures;

Provided that this requirement shall not apply to such valves and discharges in any ship the keel of which was laid before 1st January, 1947, unless in the case of valves these are attached to the sides of the ship.

Side scuttles.

35.—(1) Side scuttles to spaces below the freeboard deck, or to spaces below the superstructure deck of superstructures closed by Class 1 or Class 2 closing appliances, shall be fitted with efficient inside deadlights permanently attached in their proper positions so that they can be effectively closed and secured watertight.

(2) Where, however, such spaces in superstructures are appropriated to passengers, other than steerage passengers, or to crew, the side scuttles may have portable deadlights stowed adjacent to the side scuttles, provided they are readily accessible at all times on service.

(3) The side scuttles and deadlights shall be of substantial construction and of types approved by the Minister.

MISCELLANEOUS PROVISIONS

Guard rails.

36. Efficient guard rails or bulwarks shall be fitted on all exposed portions of freeboard and superstructure decks.

Freeing ports.

37.—(1) Where bulwarks on the weather portions of freeboard or superstructure decks form "wells", ample provision shall be made for rapidly freeing the decks of water and for draining them. The minimum freeing port area on each side of the ship for each "well" on freeboard decks and on raised quarter decks shall be that given by the following scale; the minimum area for each well on any superstructure deck other than a raised quarter deck shall be one half the area given by that scale. Where the length of the well exceeds seven-tenths of the length of the ship as defined in Rule 41 the Assigning Authority may modify that scale. In ships with less than the standard sheer the freeing port area shall be increased as required by the Assigning Authority.

Scale of Freeing Port Area

| *Length of Bulwarks in well in Feet* | *Freeing Port Area on each side in Square Feet* |
|---|---|
| 15 | 8.0 |
| 20 | 8.5 |
| 25 | 9.0 |
| 30 | 9.5 |
| 35 | 10.0 |
| 40 | 10.5 |
| 45 | 11.0 |
| 50 | 11.5 |
| 55 | 12.0 |
| 60 | 12.5 |
| 65 | 13.0 |
| Above 65 | 1 square foot for each additional 5 feet length of bulwarks. |

(2) The lower edges of the freeing ports shall be as near the deck as practicable and as a general rule shall not be higher than the upper edge of the gunwale bar. Two-thirds of the freeing port area required shall be provided in the midship half of the well.

(3) All such opening in the bulwarks shall be protected by rails or bars spaced about 9 inches apart. If shutters are fitted to freeing ports, ample clearance shall be provided to prevent jamming. Hinges shall have brass pins.

Protection of crew.

38.—(1) Gangways, lifelines or other satisfactory means shall be provided for the protection of the crew in getting to and from their quarters.

(2) The strength of houses for the accommodation of crew on flush deck ships shall be equivalent to that required for superstructure bulkheads.

Special provision for exceptional ships.

39. Notwithstanding anything in the foregoing provisions of this Part of these Rules, the Assigning Authority may, in any exceptional case, allow departures from the said provisions on condition that the freeboards computed for the ship are increased to such extent as will, in the opinion of the Minister, secure that the protection afforded to the ship and crew is not less effective than it would be if the ship fully complied with the said provisions and there had been no increase of freeboards.

## PART VI.—COMPUTATION OF FREEBOARDS FOR STEAMERS

Freeboards for steamers.

40. Subject to the provisions of paragraph (*c*) of subsection (2) of section 203 of the Act and subject to the provisions of Rule 39 of these Rules, the freeboards for steamers, other than tankers or steamers of special type to which freeboards are assigned under Parts IX and X of these Rules, shall be computed in accordance with this Part of these Rules.

Length.

41. The length (L) to be used with these Rules is the length in feet on the summer load water-line from the fore side of the stem to the after side of the rudder post. Where there is no rudder post, the length is measured from the fore side of the stem to the axis of the rudder stock. For ships with cruiser sterns, the length shall be taken as 96 per cent of the total length on the designed summer load water-line or as the length from the fore side of the stem to the axis of the rudder stock if that be the greater.

Breadth.

42. The breadth (B) to be used with these Rules is the maximum breadth in feet amidships to the moulded line of the frame in iron or steel ships, and to the outside of the planking in wood or composite ships.

Moulded depth.

43. The moulded depth is the vertical distance in feet, measured amidships, from the top of the keel to the top of the freeboard deck beam at the side. In wood or composite ships the distance is measured from the lower edge of the keel rabbet. Where the form at the lower part of the midship section is of a hollow character, or where thick garboards are fitted, the depth is measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel.

Depth for freeboard.

44.—(1) The depth (D) to be used with these Rules is the moulded depth plus the thickness of stringer plate, or plus $T\frac{(L-S)}{L}$ if that be greater, where—

T is the mean thickness of the exposed deck clear of deck openings, and

S is the total length of superstructures as defined in Rule 49.

(2) Where the topsides are of unusual form, D is the depth of a midships section having vertical topsides, standard round of beam and area of topside section equal to that in the actual midship section. Where there is a step or break in the topsides (*e.g.* as in a turret deck ship) 70 per cent of the area above the step or break is included in the area used to determine the equivalent section.

(3) In a ship without an enclosed superstructure covering at least 6L amidships, without a complete trunk or without a combination of intact partial superstructures and trunk extending all fore and aft, where D is less than $\frac{L}{15}$, the depth used with the table set out in Rule 49 shall not be taken as less than $\frac{L}{15}$.

Coefficient of fineness.

45.—(1) The coefficient of fineness ($c$) to be used with these Rules is given by the formula :—

$$c = \frac{35\Delta}{L.B.\ d_1}$$

where $\Delta$ is the ship's moulded displacement in tons (excluding bossing) at a mean moulded draught $d_1$ which is 85 per cent of the moulded depth.

(2) The coefficient ($c$) shall not be taken as less than .68.

## Strength

Strength to be adequate.

46.—(1) The Assigning Authority shall be satisfied with the structural strength of any ship before assigning to it a freeboard.

(2) Ships which comply with the highest standards of the rules of a Classification Society recognised for this purpose by the Minister shall be regarded as having sufficient strength for the minimum freeboards allowed under these Rules.

(3) Ships which do not comply with the aforementioned standards shall be assigned such increased freeboards as shall be determined by the Assigning Authority, having regard to the extent to which the ship complies with the following strength moduli :—

(*a*) *Material.*—The strength moduli are based on the assumption that the structure is built of mild steel, manufactured by the open hearth process (acid or basic), and having a tensile strength of 26 to 32 tons per square inch, and an elongation of at least 16 per cent on a length of 8 inches.

(*b*) *Strength Deck.*—The strength deck is the uppermost deck which is incorporated into and forms an integral part of the longitudinal girder within the half-length amidships.

(*c*) *Depth to Strength Deck* (*Ds*). The depth to strength deck is the vertical distance in feet amidships from the top of the keel to the top of the strength deck beam at the side.

(*d*) *Draught* (*d*).—the draught is the vertical distance in feet amidships from the top of the keel to the centre of the disc.

(*e*) *Longitudinal Modulus.*—The longitudinal modulus $\frac{I}{y}$ is the moment of inertia I of the midship section about the neutral axis divided by the distance y measured from the neutral axis to the top of the strength deck beam at side, calculated in way of openings but without deductions for rivet holes. Areas are measured in square inches and distances in feet.

Below the strength deck, all continuous longitudinal members other than such parts of the under deck girders as are required entirely for supporting purposes, are included. Above the strength deck, the gunwale angle bar and the extension of the sheerstrake are the only members included.

The required longitudinal modulus for effective material is expressed by the formula f.d.B, where f is the factor obtained from the following table :—

| L. | f. | L. | f. |
|---|---|---|---|
| 100 | 1.80 | 360 | 9.40 |
| 120 | 2.00 | 380 | 10.30 |
| 140 | 2.35 | 400 | 11.20 |
| 160 | 2.70 | 420 | 12.15 |
| 180 | 3.15 | 440 | 13.10 |
| 200 | 3.60 | 460 | 14.15 |
| 220 | 4.20 | 480 | 15.15 |
| 240 | 4.80 | 500 | 16.25 |
| 260 | 5.45 | 520 | 17.35 |
| 280 | 6.20 | 540 | 18.45 |
| 300 | 6.95 | 560 | 19.60 |
| 320 | 7.70 | 580 | 20.80 |
| 340 | 8.55 | 600 | 22.00 |

For intermediate length, the value of f is determined by interpolation.

This formula applies where L does not exceed 600 feet, B is between $\frac{L}{10} + 5$ and $\frac{L}{10} + 20$, both inclusive, and $\frac{L}{D_s}$ is between 10 and 13.5, both inclusive.

(*f*) *Frame*—For the purpose of the frame modulus, the frame is regarded as composed of a frame angle and a reverse angle each of the same size and thickness.

(*g*) *Frame Modulus*—The modulus $\frac{I}{y}$ of the midship frame below the lowest tier of beams is the moment of inertia I of the frame section about the neutral axis divided by the distance y measured from the neutral axis to the extremity of the frame section, calculated without deduction for rivet and bolt holes. The modulus is measured in inch units.

The required frame modulus is expressed by the formula—

$$\frac{s(d-t)(f_1 + f_2)}{1,000}.$$

where—

s is the frame spacing in inches ;

t is the vertical distance in feet measured at amidships from the top of the keel to a point midway between the top of the inner bottom at side and the top of the heel bracket (*see* figure 4) ; where there is no double bottom, t is measured to a point midway between the top of the floor at centre and the top of the floor at side ;

$f_1$ is a coefficient depending on H, which, in ships fitted with double bottoms, is the vertical distance in feet from the middle of the beam bracket of the lowest tier of beams at side to a point midway between the top of the inner bottom at side and the top of the heel bracket. (*See* figure 4). Where there is no double bottom, H is measured to a point midway between the top of the floor at centre and the top of the floor at side. Where the frame obtains additional strength from the form of the ship, due allowance is made in the value of $f_1$ ;

$f_2$ is a coefficient depending on K, which is the vertical distance in feet from the top of the lowest tier of beams at side to a point 7 feet 6 inches above the freeboard deck at side, or, if there is a superstructure, to a point 12 feet 6 inches above the freehold deck at side (*see* figure 4).

The values of $f_1$ and $f_2$ are obtained from the following tables—

| H in feet | 0 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 | 25 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $f_1$ | 9 | 11 | 12.5 | 15 | 19 | 24 | 29.5 | 36 | 43 | 51 | 59 |

| K in feet | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 |
|---|---|---|---|---|---|---|---|---|---|
| $f_2$ | 0 | 0.5 | 1.0 | 2.0 | 3.0 | 4.5 | 6.5 | 9.0 | 12.0 |

Intermediate values are obtained by interpolation.

This formula applies where D is between 15 feet and 60 feet, both inclusive, B is between $\frac{L}{10} + 5$ and $\frac{L}{10} + 20$ both inclusive, $\frac{L}{D_s}$ is between 10 and 13.5 both inclusive; and the horizontal distance from the outside of the frame to the centre of the first row of pillars does not exceed 20 feet.

In single deck ships of ordinary form, where H does not exceed 18 feet, the frame modulus determined by the preceding method is multiplied by the factor $f_3$ where $f_3 = .50 + .05(H-8)$.

Where the horizontal distance from the outside of the frame to the centre of the first row of pillars exceeds 20 feet, sufficient additional strength shall be provided to the satisfaction of the Assigning Authority.

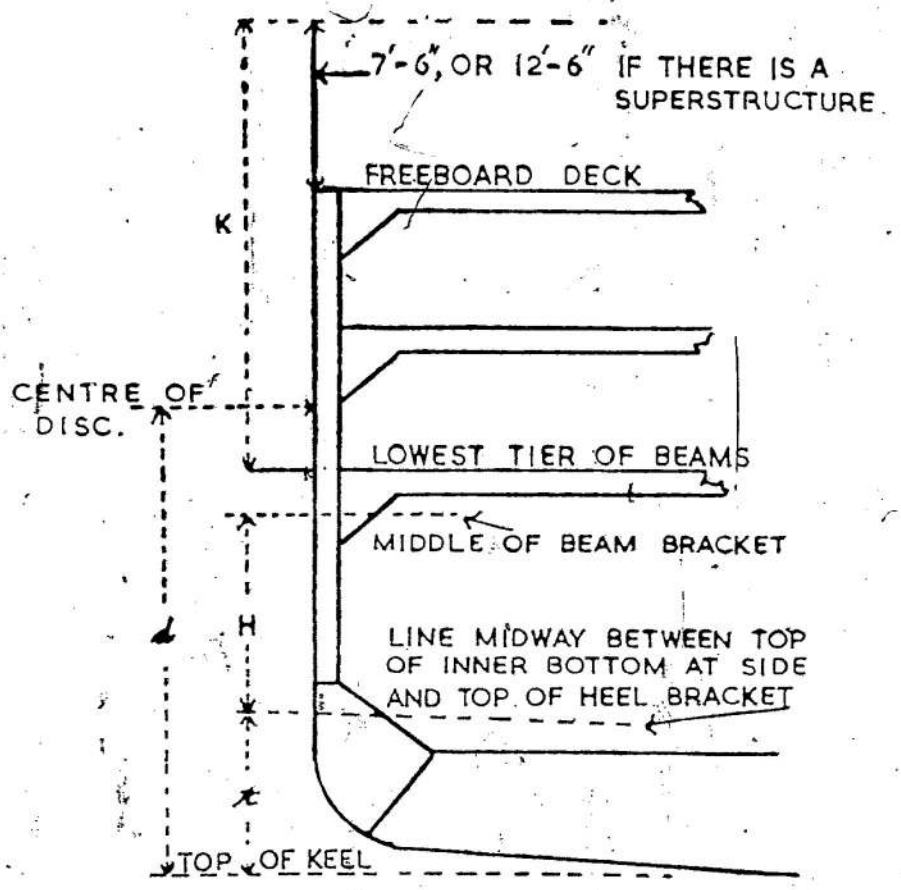



FIGURE 4.

## SUPERSTRUCTURES

Height of Superstructure.

47. The height of a superstructure is the least vertical height measured from the top of the superstructure deck to the top of the freeboard deck beams minus the difference between D and the moulded depth as defined in Rules 43 and 44.

Standard height.

48. The standard height of a raised quarterdeck is 3 feet for ships up to and including 100 feet in length, 4 feet for ships 250 feet in length and 6 feet for ships 400 feet in length and above. The standard height at intermediate lengths is obtained by interpolation.

Length of superstructure.

49. The length of a superstructure (S) is the mean covered length of the parts of the superstructure which extend to the sides of the ship and lie within lines drawn perpendicular to the extremities of the summer load water-line as defined in Rule 41.

Enclosed superstructure.

50. A detached superstructure is regarded as enclosed only where—

(*i*) the enclosing bulkheads are of efficient construction as required by Rule 51 ;

(*ii*) the access openings in these bulkheads are fitted with Class 1 or Class 2 closing appliances (as defined in Rules 52 and 53) ;

(*iii*) all other openings in sides or ends of the superstructure are fitted with efficient weathertight means of closing, and

(*iv*) independent means of access to crew, machinery, bunker and other working spaces within bridges and poops are at all times available when the bulkhead openings are closed.

Superstructure Bulkheads.

51. Bulkheads at exposed ends of poops, bridges and forecastles are deemed to be of efficient construction where the Assigning Authority are satisfied that, in the circumstances, they are equivalent to the following standard for ships with minimum freeboards, under which standard the stiffeners and plating are of the scantlings given in Table 3 in Appendix I to these Rules, the stiffeners are spaced 30 inches apart, the stiffeners on poop and bridge front bulkheads have efficient end connections, and those on after bulkheads of bridges and forecastles extend for the whole distance between the margin angles of the bulkheads.

### APPLIANCES FOR CLOSING ACCESS OPENINGS IN BULKHEADS AT ENDS OF DETACHED SUPERSTRUCTURES

Class 1 closing appliances.

52.—(1) Class 1 closing appliances shall be closing appliances which comply with the following conditions—

(*a*) They shall be constructed of iron or steel ;

(*b*) They shall in all cases be permanently and strongly attached to the bulkhead ;

(*c*) They shall be framed, stiffened and fitted so that the whole structure is of equivalent strength to the unpierced bulkhead, and they shall be weathertight when closed.

(2) The means for securing these appliances shall be permanently attached to the bulkhead or to the appliances and the latter shall be so arranged that they can be closed and secured from both sides of the bulkhead or from the deck above. The sills of the access openings shall be at least 15 inches above the deck.

53. The following closing appliances shall be Class 2 closing appliances : — Class 2 closing appliances.

(*i*) Strongly framed hard wood hinged doors, which are not more than 30 inches wide or less than 2 inches thick ;

(*ii*) Shifting boards fitted for the full height of the opening in channels riveted to the bulkheads, the shifting boards being at least 2 inches thick where the width of opening is 30 inches or less, and increased in thickness at the rate of 1 inch for each additional 15 inches of width ;

(*iii*) Portable plates of equal efficiency with the appliances specified in (*i*) or (*ii*).

### Temporary Appliances for closing openings in Superstructure Decks

54. Temporary closing appliances for middle line openings in the deck of an enclosed superstructure shall be regarded as efficient if they consist of : — Temporary closing appliances.

(*i*) a steel coaming not less than 9 inches in height efficiently riveted to the deck ;

(*ii*) hatchway covers as required by Rule 19, secured by hemp lashings ;

(*iii*) hatchway supports as required by Rules 20 and 21 and Tables 1 or 2 in Appendix I to these Rules.

### Effective Length of detached Superstructure

55. For the purpose of determining the effective length of detached superstructures, Rules 56 to 61 shall apply.

56.—(1) Where exposed bulkheads at the ends of poops, bridges and forecastles are not of efficient construction, they shall be treated as non-existent. General.

(2) Where in the side plating of a superstructure there is an opening not provided with permanent means of closing, the part of the superstructure in way of the opening shall be regarded as having no effective length.

(3) Where the height of a superstructure is less than the standard, its length shall be reduced in the ratio of the actual to the standard height. Where the height exceeds the standard, no increase shall be made in the length of the superstructure.

57.—(1) Where there is an efficient bulkhead and the access openings are fitted with Class 1 closing appliances, the length of the poop to the bulkhead shall be the effective length. Poop.

(2) Where the access openings in an efficient bulkhead are fitted with Class 2 closing appliances and the length of the poop to the bulkhead is .5L or less, 100 per cent of that length shall be the effective length ; where the length is .7L or more, 90 per cent of that length shall be the effective length ; where the length is between .5L and .7L an intermediate percentage of that length shall be the effective length ; but where in any of these cases an allowance is given for an efficient adjacent trunk (*see* Rule 61), only 90 per cent of the length to the bulkhead shall be the efficient length.

(3) 50 per cent of an open poop or of an open extension of a poop beyond an efficient bulkhead shall be the effective length of the open poop or extension, as the case may be.

Raised quarterdeck.

58. Where there is an efficient intact bulkhead, the length of the raised quarterdeck to the bulkhead shall be the effective length. Where the bulkhead is not intact, the superstructure shall be regarded as a poop of less than standard height.

Bridge.

59.—(1) Where there is an efficient bulkhead at each end of the bridge and the access openings in the bulkheads are fitted with Class 1 closing appliances, the length between the bulkheads shall be the effective length.

(2) Where the access openings in the forward bulkhead are fitted with Class 1 closing appliances and the access openings in the after bulkhead with Class 2 closing appliances, the length between the bulkheads shall be the effective length ; but where an allowance is given for an efficient trunk adjacent to the after bulkhead (*see* Rule 61), 90 per cent of the length shall be the effective length. Where the access openings in both bulkheads are fitted with Class 2 closing appliances, 90 per cent of the length between the bulkheads shall be the effective length. Where the access openings in the forward bulkhead are fitted with Class 1 or Class 2 closing appliances and the access openings in the after bulkhead have no closing appliances, 75 per cent of the length between the bulkheads shall be the effective length. Where the access openings in both bulkheads have no closing appliances, 50 per cent of the length shall be the effective length.

(3) 75 per cent of the length of an open extension beyond the after bulkhead, and 50 per cent of that beyond the forward bulkhead, shall be the effective length.

Forecastle.

60.—(1) Where there is an efficient bulkhead and the access openings are fitted with Class 1 or Class 2 closing appliances, the length of the forecastle to the bulkhead shall be the effective length. Where no closing appliances are fitted and the sheer forward of amidships is not less than the standard sheer, 100 per cent of the length of the forecastle forward of .1L from the forward perpendicular shall be the effective length.

(2) Where the sheer forward is half the standard sheer or less, 50 per cent of the length shall be the effective length ; and where the sheer forward is intermediate between the standard and half the standard sheer, an intermediate percentage of that length shall be the effective length.

(3) 50 per cent of the length of an open extension beyond the bulkhead or beyond .1L from the forward perpendicular shall be the effective length.

Trunks.

61.—(1) A trunk or similar structure which does not extend to the sides of the ship shall be regarded as efficient provided that—

(*a*) the trunk is at least as strong as a superstructure ;

(*b*) the hatchways are in the trunk deck and comply with the requirements of Rules 17 to 24 and the width of the trunk deck stringer provides a satisfactory gangway and sufficient lateral stiffness ;

(*c*) a permanent working platform fore and aft fitted with guard rails is provided by the trunk deck or by detached trunks connected to other superstructures by efficient permanent gangways ;

(*d*) ventilators are protected by the trunk, by watertight covers or by equivalent means ;

(*e*) open rails are fitted on the weather portions of the freeboard deck in way of the trunk for at least half their length ;

(*f*) the machinery casings are protected by the trunk, by a superstructure of standard height, or by a deck house of the same height and of equivalent strength.

(2) Where access openings in poop and bridge bulkheads are fitted with Class 1 closing appliances, 100 per cent of the length of an efficient trunk reduced in the ratio of its mean breadth to B (as defined in Rule 42) shall be added to the effective length of the superstructures. Where the access openings in these bulkheads are not fitted with Class 1 closing appliances 90 per cent of the length reduced as above shall be added.

(3) Where the height of the trunk is less than the standard height as determined in accordance with Rule 48 the addition referred to in paragraph (2) of this Rule shall be reduced in the ratio of the actual to the standard height; where the height of the hatchway coamings on the trunk deck is less than the height required by Rule 18, a reduction from the actual height of trunk shall be made corresponding to the difference between the actual height of the coamings and the height required by Rule 18.

### Effective Length of enclosed Superstructures with middle line Openings

Openings without permanent means of closing.

62. Where there is an enclosed superstructure with one or more middle line openings in the deck not provided with permanent means of closing in accordance with Rules 17 to 24, the effective length of the superstructure is determined as follows—

(*i*) where efficient temporary closing appliances are not provided for the middle line deck openings in accordance with Rule 54, or the breadth of opening is 80 per cent or more of the breadth ($B_1$) of the superstructure deck at the middle of the opening, the ship shall be regarded as having an open well in way of each opening, and freeing ports shall be provided in way of this well. The effective length of superstructure between openings shall be ascertained by applying Rules 57, 59 and 60.

(*ii*) where efficient temporary closing appliances as defined in Rule 54 are provided for middle line deck openings and the breadth of opening is less than .8 $B_1$ the effective length of superstructure between openings shall be ascertained by applying Rules 57, 59 and 60, except that where access openings in 'tween deck bulkheads are closed by Class 2 closing appliances, they shall be regarded as being closed by Class 1 closing appliances. The total effective length shall be obtained by adding to the length thus determined the difference between that length and the length of ship, modified in the ratio of—

$$\frac{B_1-b}{B_1}$$ where b=breadth of deck opening;

where $\frac{B_1-b}{B_1}$ is greater than .5 it is taken as .5.

### Deductions for Superstructures

Deductions.

63. Where the effective length of superstructures is 1.0 L, the deduction from the freeboard shall be 14 inches at 80 feet length of ship, 34 inches at 280 feet length, and 42 inches at 400 feet length and above; deductions at intermediate lengths shall be obtained by interpolation. Where the total effective

length of superstructure is less than 1.0 L, the deduction shall be a percentage obtained from the following Table—

| Superstructures | Total Effective Length of Superstructures (E) | | | | | | | | | | | Line |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | .1L | .2L | .3L | .4L | .5L | .6L | .7L | .8L | .9L | 1.0L | |
| | per cent | per | per | per | per | per | per | per | per | per | per | |
| All types with forecastle and without detached bridge .. | 0 | 5 | 10 | 15 | 23.5 | 32 | 46 | 63 | 75.3 | 87.7 | 100 | A |
| All types with forecastle and detached bridge * | 0 | 6.3 | 12.7 | 19 | 27.5 | 36 | 46 | 63 | 75.3 | 87.7 | 100 | B |

*Where the effective length of a detached bridge is less than .2 L the percentages are obtained by interpolation between lines B and A.

Where no forecastle is fitted the above percentages are reduced by 5.

Percentages for intermediate lengths of superstructures are obtained by interpolation.

## Sheer

General.

64.—(1) The sheer shall be measured from the deck at side to a line of reference drawn parallel to the keel through the sheer line at amidships.

(2) In flush deck ships and in ships with detached superstructures the sheer shall be measured at the freeboard deck.

(3) In ships with topsides of unusual form in which there is a step or break in the topsides, the sheer shall be considered in relation to the equivalent depth amidships determined in accordance with Rule 44.

(4) In ships with a superstructure of standard height which extends over the whole length of the freeboard deck, the sheer shall be measured at the superstructure deck ; where the height exceeds the standard, the sheer may be considered in relation to the standard height.

(5) Where a superstructure is intact or access openings in its enclosing bulkheads are fitted with Class 1 closing appliances, and the superstructure deck has at least the same sheer as the exposed freeboard deck, the sheer of the enclosed portion of the freeboard deck shall not be taken into account.

Standard sheer profile.

65. The ordinates, in inches, of the standard sheer profile are given in the following Table, where L is the number of feet in the length of the ship :—

| Station | Ordinate | Factor |
|---|---|---|
| A.P. | .1 L+10 | 1 |
| 1/6 L from A.P. | .0445 L+4.45 | 4 |
| 1/3 L from A.P. | .011 L+1.1 | 2 |
| Amidships | 0 | 4 |
| 1/3 L from F.P. | .022 L+2.2 | 2 |
| 1/6 L from F.P. | .089 L+8.9 | 4 |
| F.P. | .2 L+20 | 1 |

A.P.=After end of summer load water-line.
F.P.=Fore end of summer load water-line.

Measurement of variations.

66.—(1) Where the sheer profile differs from the standard, the seven ordinates of each profile shall be multiplied by the appropriate factors given in table of ordinates. The difference between the sums of the respective products, divided by 18, measures the deficiency or excess of sheer.

(2) Where the after half of the sheer profile is greater than the standard and the forward half is less than the standard, no credit shall be allowed for the part in excess.

(3) Where the forward half of the sheer profile exceeds the standard, and the after portion of the sheer profile is not less than 75 per cent of the standard, credit shall be allowed for the part in excess ; where the after part is less than 50 per cent of the standard no credit shall be given for the excess sheer forward. Where the after sheer is between 50 and 75 per cent of the standard, an intermediate allowance may be granted for excess sheer forward.

Correction for Variations.

67. The correction for sheer shall be the deficiency or excess of sheer determined in accordance with Rule 64, multiplied by $.75 - \frac{S}{2L}$, where S is the total length of superstructure, as defined in Rule 49.

Addition for deficiency.

68. Where the sheer is less than the standard, the correction for deficiency in sheer, determined in accordance with Rule 67, shall be added to the freeboard.

Deduction for Excess.

69. In flush deck ships and in ships where an enclosed superstructure covers .1 L before and .1 L abaft amidships, the correction for excess of sheer determined in accordance with Rule 67, shall be deducted from the freeboard ; in ships with detached superstructures where no enclosed superstructure covers less than .1 L before and .1 L abaft amidships, the deduction shall be obtained by interpolation. The maximum deduction for excess sheer shall be 1½ inches at 100 feet length of ship and shall increase at the rate of 1½ inches for each additional 100 feet in the length of the ship.

## Round of Beam

Standard.

70. The standard round of beam of the freeboard deck is one-fiftieth of the breadth of the ship.

Correction.

71. Where the round of beam of the freeboard deck is greater or less than the standard, the freeboard shall be decreased or increased respectively by one fourth of the difference between the actual and the standard round of beam, multiplied by the proportion of the length of the freeboard deck not covered by enclosed superstructures. Twice the standard round of beam is the maximum for which allowance may be given.

## Minimum Freeboards

Summer.

72. The minimum freeboard in summer shall be the freeboard derived from the Freeboard Table set out in Rule 77 after correction for departures from the standards and after deduction for superstructures in accordance with these Rules, so however that if the freeboard, calculated in accordance with these Rules but before the correction required by Note (v) appended to the Table is made, be less than two inches, two inches shall be substituted therefor.

Tropical.

73. The minimum freeboard in the Tropical Zone shall be the freeboard obtained by a deduction from the Summer freeboard of $\frac{1}{4}$ inch per foot of Summer draught measured from the top of the keel to the centre of the load

line disc, so however that if the freeboard, calculated in accordance with these Rules but before the correction required by Note (*v*) appended to the Table set out in Rule 77 is made, be less than two inches, two inches shall be substituted therefor.

Winter.

74. The minimum freeboard in Winter shall be the freeboard obtained by an addition to the Summer freeboard of $\frac{1}{4}$ inch per foot of Summer draught, measured from the top of the keel to the centre of the load line disc.

Winter North Atlantic.

75. The minimum Winter North Atlantic freeboard for steamers not exceeding 330 feet in length shall be the Winter freeboard plus two inches; for steamers over 330 feet in length the minimum Winter North Atlantic freeboard shall be the Winter freeboard.

Fresh Water.

76.—(1) The minimum freeboard in fresh water of unit density shall be the freeboard obtained by deducting from the minimum freeboard in salt water—

$$\frac{\Delta}{40\ T} \text{ inches, where}$$

$\Delta$ = displacement in salt water in tons at the summer load water-line, and
T = tons per inch immersion in salt water at the summer load water-line.

(2) Where the displacement at the summer load water-line cannot be certified, the deduction shall be $\frac{1}{4}$ inch per foot of summer draught measured from the top of the keel to the centre of the disc.

Freeboard Table.

77. Basic Minimum Summer Freeboards for Steamers which comply with Standards laid down in these Rules—

| *L* | *Freeboard* | *L* | *Freeboard* | *L* | *Freeboard* | *L* | *Freeboard* |
|---|---|---|---|---|---|---|---|
| *Feet* | *Inches* | *Feet* | *Inches* | *Feet* | *Inches* | *Feet* | *Inches* |
| 80 | 8.0 | 250 | 32.3 | 420 | 77.8 | 590 | 127.0 |
| 90 | 9.0 | 260 | 34.4 | 430 | 80.9 | 600 | 129.5 |
| 100 | 10.0 | 270 | 36.5 | 440 | 84.0 | 610 | 132.0 |
| 110 | 11.0 | 280 | 38.7 | 450 | 87.1 | 620 | 134.4 |
| 120 | 12.0 | 290 | 41.0 | 460 | 90.2 | 630 | 136.8 |
| 130 | 13.0 | 300 | 43.4 | 470 | 93.3 | 640 | 139.1 |
| 140 | 14.2 | 310 | 45.9 | 480 | 96.3 | 650 | 141.4 |
| 150 | 15.5 | 320 | 48.4 | 490 | 99.3 | 660 | 143.7 |
| 160 | 16.9 | 330 | 51.0 | 500 | 102.3 | 670 | 145.9 |
| 170 | 18.3 | 340 | 53.7 | 510 | 105.2 | 680 | 148.1 |
| 180 | 19.8 | 350 | 56.5 | 520 | 108.1 | 690 | 150.2 |
| 190 | 21.4 | 360 | 59.4 | 530 | 110.9 | 700 | 152.3 |
| 200 | 23.1 | 370 | 62.4 | 540 | 113.7 | 710 | 154.4 |
| 210 | 24.8 | 380 | 65.4 | 550 | 116.4 | 720 | 156.4 |
| 220 | 26.6 | 390 | 68.4 | 560 | 119.1 | 730 | 158.5 |
| 230 | 28.5 | 400 | 71.5 | 570 | 121.8 | 740 | 160.5 |
| 240 | 30.3 | 410 | 74.6 | 580 | 124.4 | 750 | 162.5 |

*Note.*—(*i*) The minimum freeboards for flush deck steamers shall be obtained by the addition to the above Table at the rate of 1½ inches for every 100 feet of length.

(*ii*) The freeboards at intermediate lengths shall be obtained by interpolation.

(*iii*) Where c exceeds .68, the freeboard shall be multiplied by the factor—

$$\frac{c + .68}{1.36}$$

(*iv*) (*a*) Where D exceeds $\frac{L}{15}$ the freeboard shall be increased by $\left\{D - \frac{L}{15}\right\}$ R inches, where R is $\frac{L}{130}$ at lengths less than 390 feet, and 3 at 390 feet length and above.

(*b*) In a ship with an enclosed superstructure covering at least .6 L amidships, or with a complete trunk, or with a combination of intact partial superstructures and trunk which extends all fore and aft, where D is less than $\frac{L}{15}$, the freeboard shall be reduced at the above rate. Where the height of the superstructure or trunk is less than the standard height, as determined in accordance with Rule 48, the reduction shall be modified in the ratio which the actual height bears to the standard height.

(*v*) Where the actual depth to the surface of the freeboard deck amidships is greater or less than D, the difference between these two depths, in inches, shall be added to or deducted from the freeboard as the case may be.

## PART VII

### Computation of Freeboards for Sailing Ships

Computation of Freeboard.

78. Subject to the provisions of paragraph (*c*) of subsection (2) of section 203 of the Act and subject to the provisions of Rule 39 and Rules 79 to 85 of these Rules, freeboards for sailing ships shall be computed from the Freeboard Table for Sailing Ships contained in Rule 84 in the same manner as the freeboards for steamers are computed from the Freeboard Table for Steamers contained in Rule 77.

Depth for Freeboard (D).

79.—(1) In sailing ships having a greater rise of floor than 1½ inches per foot, the vertical distance from the top of the keel referred to in Rule 43 shall be reduced by half the distance between the total rise of floor at the half-breadth of the ship and the total rise at 1½ inches per foot. 2½ inches per foot of half-breadth is the maximum rate of rise for which a deduction may be made.

(2) Where the form at the lower part of the midship section is of a hollow character or thick garboards are fitted, the depth shall be measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel.

(3) The depth used with the Freeboard Table shall be taken as not less than $\frac{L}{12}$

Coefficient of Fineness.

80. The coefficient of fineness (*c*) used with the Freeboard Table contained in Rule 84 shall be taken as not less than .62 and not greater than .72.

Superstructures in wooden ships.

81. In wood ships, the Assigning Authority shall satisfy themselves as to the efficiency of the construction and closing arrangements of superstructures for which deductions are made from the freeboard.

Deductions for Superstructures.

82. Where the effective length of superstructures is 1.0 L, the deduction from the freeboard shall be 3 inches at 80 feet length of ship, and 28 inches at 330 feet length and above; deductions at intermediate lengths shall be obtained by interpolation. Where the total effective length of superstructures is less than 1.0 L, the deduction shall be a percentage obtained from the following Table :—

| Type of superstructures | Total Effective Length of Superstructures (E) | | | | | | | | | | | Line |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | .1L | .2L | .3L | .4L | .5L | .6L | .7L | .8L | .9L | 1.0L | |
| | % | % | % | % | % | % | % | % | % | % | % | |
| All types without bridge | 0 | 7 | 13 | 17 | 23.5 | 30 | 47.5 | 70 | 80 | 90 | 100 | A |
| All types with bridge * ... | 0 | 7 | 14.7 | 22 | 32 | 42 | 56 | 70 | 80 | 90 | 100 | B |

* Where the effective length of bridge is less than .2 L, the percentages are obtained by interpolation between lines B and A. Percentages for intermediate lengths of superstructures are obtained by interpolation.

Minimum Freeboards.

83. (1) No addition to the freeboard shall be required for Winter freeboard, nor shall a deduction be permitted for Tropical freeboard.

(2) An increase in freeboard of 3 inches shall be made for the Winter North Atlantic freeboard.

(3) In computing the Fresh Water freeboard for a wood ship, the draught shall be measured from the lower edge of the rabbet of the keel to the centre of the load line disc.

Freeboard Table for Sailing Ships.

84. Minimum Summer, Winter and Tropical Freeboards for Iron and Steel Flush Deck Sailing Ships, which comply with the Standards laid down in these Rules—

| L | Freeboard | L | Freeboard | L | Freeboard | L | Freeboard |
|---|---|---|---|---|---|---|---|
| Feet | Inches | Feet | Inches | Feet | Inches | Feet | Inches |
| 80 | 9.2 | 140 | 21.3 | 200 | 35.4 | 270 | 53.5 |
| 90 | 11.0 | 150 | 23.5 | 210 | 37.9 | 280 | 56.3 |
| 100 | 12.9 | 160 | 25.8 | 220 | 40.4 | 290 | 59.1 |
| 110 | 14.9 | 170 | 28.2 | 230 | 42.9 | 300 | 61.9 |
| 120 | 17.0 | 180 | 30.6 | 240 | 45.5 | 310 | 64.7 |
| 130 | 19.1 | 190 | 33.0 | 250 | 48.1 | 320 | 67.6 |
| | | | | 260 | 50.8 | 330 | 70.5 |

*Note* (*i*) The freeboards at intermediate lengths shall be obtained by interpolation.

(*ii*) Where c exceeds .62 the freeboard shall be multiplied by the factor

$$\frac{c + .62}{1.24}$$

(*iii*) Where D exceeds $\frac{L}{12}$ the freeboard shall be increased by

$$\left\{D - \frac{L}{12}\right\} \times \left\{1 + \frac{L}{250}\right\} \text{ inches.}$$

(*iv*) Where the actual depth to the surface of the freeboard deck amidships is greater or less than D, the difference between these two depths, in inches, shall be added to or deducted from the freeboard, as the case may be.

Freeboard for Wood Sailing Ships.

85. The freeboard for a wood sailing ship shall be the minimum freeboard which would be assigned to the ship if she were of iron or steel, with the addition of such amount of freeboard as the Assigning Authority may determine, having regard to the classification, construction, age and condition of the ship.

## PART VIII

### Freeboards for Steamers carrying Timber Deck Cargoes

Assignment.

86. Timber freeboards shall be assigned to a steamer if the steamer, being otherwise entitled to have freeboards assigned to her, complies with this Part of these Rules to the extent required in her case.

### Supplementary Conditions of Assignment

Construction.

87. The structure of the steamer shall be of sufficient strength for the deeper draught allowed and for the weight of the deck cargo.

Superstructures.

88. The steamer shall have a forecastle of at least standard height and at least 7 per cent of the length of the ship, and, in addition, a poop, or a raised quarter deck with a strong steel hood or deck house fitted aft:

Provided that a steamer the keel of which was laid before 1st July, 1932, need comply with the foregoing provisions of this Rule only so far as, in the opinion of the Assigning Authority, is reasonable and practicable.

Machinery Casings.

89. Machinery casing on the freeboard deck shall be protected by a superstructure of at least standard height, unless the machinery casings are of sufficient strength and height to permit of the carriage of timber alongside.

Double Bottom Tanks.

90. Double bottom tanks where fitted within the midship half length of the steamer shall have adequate longitudinal subdivision.

Bulwarks.

91. The steamer shall be fitted either with permanent bulwarks at least 3 feet 3 inches high, specially stiffened on the upper edge and supported by strong bulwark stays attached to the deck in the way of the beams and provided with necessary freeing ports, or, with efficient rails at least 3 feet 3 inches high and of specially strong construction.

Steering Arrangements.

92. Steering arrangements shall be effectively protected from damage by cargo, and, as far as practicable, shall be accessible. Efficient provision shall be made for steering in the event of a breakdown in the main steering arrangements.

Lashings.

93. Eye plates for lashings shall be riveted to the sheer strake at intervals of not more than 10 feet, the distance from an end bulkhead of a superstructure to the first eyeplate being not more than 6 feet 6 inches. Additional eyeplates may be fitted on the stringer plate.

## Computation of Freeboard

Computation.

94. (1) Where the Assigning Authority is satisfied that the steamer is suitable and that the conditions and arrangements are at least equal to the foregoing requirements for the carriage of timber deck cargo, the Summer freeboards computed in accordance with the Rules and Tables in Part VI may be modified to give special timber freeboards, by substituting the following percentages for those in Rule 63.

| Types | Total Effective Length of Superstructures (E). | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | .1L | .2L | .3L | .4L | .5L | .6L | .7L | .8L | .9L | 1.0L |
| All types | % 20 | % 30.75 | % 41.5 | % 52.25 | % 63 | % 69.25 | % 75.5 | % 81.5 | % 87.5 | % 93.75 | % 100 |

(2) The Winter Timber freeboard shall be obtained by adding to the Summer Timber freeboard one-third of an inch per foot of moulded Summer Timber draught.

(3) The Winter North Atlantic Timber freeboards shall be identical with the Winter North Atlantic freeboards prescribed in Rule 75.

(4) The Tropical Timber freeboard shall be obtained by deducting from the Summer Timber freeboard one-quarter of an inch per foot of the moulded Summer Timber draught.

Special Cases.

95. In the case of a steamer the keel of which was laid before the 1st July, 1932, which does not fully comply with the requirements of Rule 88, the Assigning Authority shall make such addition to the freeboard as may be considered reasonable by the Minister, having regard to the extent to which the steamer falls short of full compliance with those requirements.

## Part IX—Freeboards for Tankers

Assignment.

96. Tanker freeboards shall be assigned to a ship, being a tanker, if the ship complies with the Conditions of Assignment and also complies with this Part of these Rules to the extent thereby required in her case.

## Supplementary Conditions of Assignment

Construction.

97. The structure of the ship shall be of sufficient strength for the increased draught corresponding to the freeboard assigned.

Forecastle.

98. The ship shall have a forecastle of which the length is not less than 7 per cent of the length of the ship and the height is not less than the standard height.

Provided that a ship the keel of which was laid before 1st July, 1932, need comply with the foregoing provisions of this Rule only so far as, in the opinion of the Assigning Authority, is reasonable and practicable.

Machinery Casings.

99. The openings in machinery casings on the freeboard deck shall be fitted with steel doors. The casings shall be protected by an enclosed poop or bridge of at least standard height, or by a deck house of equal height and of equivalent strength. The bulkheads at the ends of these structures shall be of the scantlings required for bridge front bulkheads. All entrances to the structures from the freeboard deck shall be fitted with effective closing appliances and the sills shall be at least 18 inches above the deck. Exposed machinery casings on the superstructure deck are to be of substantial construction, and all openings in them shall be fitted with steel closing appliances permanently attached to the casings and capable of being closed and secured from both sides; the sills of such openings shall be at least 15 inches above the deck. Fiddley openings shall be as high above the superstructure deck as is reasonable and practicable and shall have strong steel covers permanently attached in their proper positions:

Provided that a ship the keel of which was laid before 1st July, 1932, need comply with the foregoing provisions of this Rule only so far as, in the opinion of the Assigning Authority, is reasonable and practicable.

Gangway.

100. An efficiently constructed permanent gangway of sufficient strength for its exposed position shall be fitted fore and aft of the level of the superstructure deck between the poop midship bridge, and when any of the crew are berthed forward, from the bridge to the forecastle, unless other equivalent means of access are provided to carry out the purpose of the gangway, such as passages below deck.

Protection of Crew, etc.

101. Safe and satisfactory access from the gangway level to the quarters of the crew, the machinery space and all other parts used in the necessary work of the ship, shall be available at all times. This Rule does not apply to pump rooms if suitable means of access are provided from the freeboard deck, and the access openings are fitted with Class 1 closing appliances.

Hatchways.

102. All hatchways on the freeboard deck and on the deck of expansion trunks shall be closed watertight by efficient steel covers.

Ventilators.

103. Ventilators to spaces below the freeboard deck shall be of ample strength or shall be protected by superstructures or by equally efficient means.

Freeing Arrangements.

104.—(1) Ships with bulwarks shall have open rails fitted for at least half the length of the exposed portion of the weather deck or such other freeing arrangements as are in the opinion of the Assigning Authority effective for the purpose of freeing the decks of water. The upper edge of the sheer strake shall be kept as low as practicable, and as a general rule shall not be higher than the upper edge of the gunwale bar.

(2) Where superstructures are connected by trunks, open rails shall be fitted for the whole length of the weather portions of the freeboard deck;

Provided that a ship the keel of which was laid before 1st July, 1932, need comply with the foregoing provisions of this Rule only so far as, in the opinion of the Assigning Authority, is reasonable and practicable.

## Computation of Freeboard

Computation.

105. Where the Assigning Authorities are satisfied that the foregoing requirements are fulfilled, they shall compute the freeboards in accordance with Part VI of these Rules, subject to the provisions of Rules 106 to 108 and to the substitution of the Table set out in Rule 109 for the Table set out in Rule 77:

Provided, however, that no addition shall be made under Note (*i*) appended to the Table in Rule 77 in respect of a flush deck steamer.

Deduction for detached Superstructures.

106. When the total effective length of superstructures is less than 1.0 L, the deduction shall be the percentage of the deduction for a superstructure of length 1.0 L, obtained from the following Table :—

| | Total Effective Length of Superstructures. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | .1L | .2L | .3L | .4L | .5L | .6L | .7L | .8L | .9L | 1.0L |
| All types | % 0 | % 7 | % 14 | % 21 | % 31 | % 41 | % 52 | % 63 | % 75.3 | % 87.7 | % 100 |

Deduction for excess sheer.

107. Where the sheer is greater than the standard, the correction for excess sheer as determined under Rule 67 shall be deducted from the freeboard of all tankers. Rule 69 shall not apply except that the maximum deduction for excess sheer shall be 1½ inches at 100 feet length of ship and shall increase at the rate of 1½ inches for each additional 100 feet in the length of the ship.

Winter North Atlantic.

108. The minimum Winter North Atlantic freeboard shall be the Winter freeboard plus an addition at the rate of 1 inch per 100 feet in length.

Freeboard Table for Tankers.

109. Freeboard Table for Tankers :—

| L Feet | Freeboard Inches | L Feet | Freeboard Inches |
|---|---|---|---|
| 190 | 21.5 | 400 | 62.5 |
| 200 | 23.1 | 410 | 64.9 |
| 210 | 24.7 | 420 | 67.4 |
| 220 | 26.3 | 430 | 69.9 |
| 230 | 28.0 | 440 | 72.5 |
| 240 | 29.7 | 450 | 75.1 |
| 250 | 31.5 | 460 | 77.7 |
| 260 | 33.3 | 470 | 80.2 |
| 270 | 35.2 | 480 | 82.7 |
| 280 | 37.1 | 490 | 85.1 |
| 290 | 39.1 | 500 | 87.5 |
| 300 | 41.1 | 510 | 89.8 |
| 310 | 43.1 | 520 | 92.1 |
| 320 | 45.1 | 530 | 94.3 |
| 330 | 47.1 | 540 | 96.5 |
| 340 | 49.2 | 550 | 98.6 |
| 350 | 51.3 | 560 | 100.7 |
| 360 | 53.5 | 570 | 102.7 |
| 370 | 55.7 | 580 | 104.6 |
| 380 | 57.9 | 590 | 106.5 |
| 390 | 60.2 | 600 | 108.4 |

The freeboards for ships above 600 feet shall be determined by the Minister

110. In the case of any ship the keel of which was laid before the 1st July, 1932, which does not fully comply with the requirements of Rules 98, and 104, the Assigning Authority shall make such addition to the freeboard as may be considered reasonable by the Minister, having regard to the extent to which the ship falls short of full compliance with those requirements. Special provision.

## Part X.—Freeboards for Ships of Special Type

111.—(1) In the case of steamers of special type over 300 feet in length possessing constructional features similar to those of a tanker which, in the opinion of the Minister afford extra invulnerability against the sea, a reduction in the freeboard computed for steamers under Part VI may be granted. Freeboards in special cases.

(2) The amount of such reduction shall be determined by the Minister with reference to the freeboard assigned to tankers, having regard to the extent to which the steamer complies with the Conditions of Assignment and with the requirements of Part IX of these Rules and the degree of sub-division provided in the ship, but the freeboard assigned to such a ship shall in no case be less than the freeboard which would be assigned to her if she were a tanker.

## Part XI.—Load Line

112.—(1) This Rule shall apply to all steamers other than steamers to which Rule 114 applies. Steamers.

(2) *Summer Load Line*—The maximum depth in salt water to which a steamer to which this Rule applies is entitled to be loaded while within :—

(*a*) The Summer Zone as defined in the First Part of the Third Schedule thereto, and Third Schedule.

(*b*) the areas specified in the first two columns of the Second and Third Parts of the said Schedule during the periods specified respectively opposite to such areas in the third column of the said Second and Third Parts of the said Schedule

shall be the depth indicated by the Summer load line.

(3) *Winter Load Line*—Save as is hereinafter provided, the maximum depth in salt water to which a steamer to which this Rule applies is entitled to be loaded while within the areas specified in the first two columns of the Second Part of the Third Schedule hereto during the periods specified respectively opposite to such areas in the fourth column of the said Second Part of the said Schedule shall be the depth indicated by the Winter load line :

Provided that in the case of a steamer required to be marked with a Winter North Atlantic load line under Part III of these Rules, the maximum depth in salt water to which such steamer is entitled to be loaded whilst engaged on a voyage across the North Atlantic Ocean within the areas numbered 1 and 2 in the first column of the said Second Part of the said Schedule during the periods specified respectively opposite to those areas in the fourth column to the said Second Part of the said Schedule shall be the depth indicated by such Winter North Atlantic load line.

(4) *Tropical Load Line*—The maximum depth in salt water to which a steamer to which this Rule applies is entitled to be loaded while within :

(*a*) the Tropical Zone as defined in the First Part of the Third Schedule hereto, and

(*b*) the areas specified in the first two columns of the Third Part of the Third Schedule hereto during the periods respectively specified opposite those areas in the fourth column of the said Third Part,

shall be the depth indicated by the Tropical load line.

Sailing ships.

113. The maximum depth in salt water to which a sailing ship is entitled to be loaded is the depth indicated by the upper edge of the line which passes through the centre of the disc, except when engaged on a voyage across the Atlantic Ocean within the areas numbered 1 and 2 in the first column of the Second Part of the Third Schedule hereto, during the periods specified respectively opposite to those areas in the fourth column of the said Second Part of the said Schedule in which case it shall be the depth indicated by the Winter North Atlantic load line.

Steamers carrying timber deck cargoes.

114.—(1) This Rule shall apply to all steamers marked with Timber load lines in accordance with Part VIII of these Rules and carrying a deck cargo of timber in compliance with the Timber Cargo Regulations.

(2) *Summer Timber Load Line*—The maximum depth in salt water to which a steamer to which this Rule applies is entitled to be loaded while within—

(*a*) The Summer Zone as defined in the First Part of the Third Schedule hereto, and

(*b*) the areas specified in the first two columns of the Second and Third Parts of the said Schedule during the periods respectively specified opposite to such areas in the third column of the Second and Third Parts of the said Schedule,

shall be the depth indicated by the Summer Timber load line.

(3) *Winter Timber Load Line*—The maximum depth in salt water to which a steamer to which this Rule applies other than a steamer to which paragraph (4) of this Rule applies, is entitled to be loaded while within the areas specified in the first two columns of the Second Part of the Third Schedule hereto during the periods respectively specified opposite to such areas in the fourth column of the said Second Part of the said Schedule, shall be the depth indicated by the Winter Timber load line.

(4) *Winter North Atlantic Timber Load Line*—The maximum depth in salt water to which a steamer to which this Rule applies is entitled to be loaded whilst engaged on a voyage across the North Atlantic Ocean within the areas numbered 1 and 2 in the first column of the Second Part of the said Schedule during the periods specified respectively opposite to those areas in the fourth column of the said Second Part, shall be the depth indicated by the Winter North Atlantic Timber load line.

(5) *Tropical Timber Load Line*—The maximum depth in salt water to which a steamer to which this Rule applies is entitled to be loaded while within—

(*a*) the Tropical Zone as defined in the First Part of the Third Schedule hereto, and

(*b*) the areas specified in the first two columns of the Third Part of the said Schedule during the periods respectively specified opposite those areas in the fourth column of the said Third Part

shall be the depth indicated by the Tropical Timber load line.

115. In the application of the foregoing Rules 112 to 114 to a ship at a port which is to be treated under the Third Schedule hereto as being on the boundary between two zones, two areas, or a zone and an area, the ship shall be deemed to be in the zone or area into which she is about to proceed or from which she has arrived, as the case may be. Boundary ports.

## Part XII.—Load Lines for Steamers plying on Inland Waters only.

116. A load line, indicating the minimum freeboard allowed, shall be assigned to any steamer exclusively employed on inland waters and which is subject to the provisions of section 229 of the Act. Such load line shall consist of a horizontal line 12 inches in length and one inch in breadth, marked on each side of the vessel amidships. The upper edge of such line shall indicate the deepest draught that the vessel may be loaded in any of the inland waters of Nigeria. Load lines shall be cut in or otherwise permanently marked on the hull and they shall be painted white or yellow on a dark ground or black on a light ground. Load Line.

117. The depth of a vessel for the purposes of this Part shall, in the case of a Power Driven Small Craft be measured amidships in a vertical line from the upper edge of the gunwale to the lowest part of the bottom at centre. The gunwale in this case is to be taken as the upper edge of hull of the craft, except that where wash boards or other planks have been fitted to the hull and extend above the true hull, the depth shall be taken from the upper edge of such wash boards or planks. In the case of craft other than Power Driven Small Craft, the depth shall be measured amidships in a vertical line from the upper edge of the gunwale or sheer strake to the top of the keel at centre. Depth.

118. The survey for the load line shall normally take place concurrently with the survey for a Passenger Certificate or a Safety Certificate or a combined Passenger and Safety Certificate, or a Power Driven Small Craft Licence. At such time, the surveyor shall ascertain the position of the load line and shall indicate such position to the owner who shall cause the proper marks to be made on the vessel to the satisfaction of the surveyor. Position of load line.

119.—(1) The position of the load line for Power Driven Small Craft shall be ascertained by allowing 4 inches of freeboard from the gunwale downwards for each foot or part thereof of depth measured in accordance with Rule 117. Freeboard.

(2) The position of the load line for vessels other than Power Driven Small Craft shall be ascertained by allowing 4 inches of freeboard from the gunwale or upper edge of the sheer strake downwards for every foot or part thereof of depth measured in accordance with Rule 117. Provided that in the case of a fully decked vessel fitted with adequate coamings round all deck openings and hatchways fitted with efficient closing appliances, the freeboard allowed may be reduced to two inches per foot or part thereof of depth.

120.—(1) As in the case of inland waters craft, the assignment of load lines is combined with Passenger and/or Safety Certificates it follows that no such certificates will be issued unless the surveyor is satisfied that the vessel Conditions of assignment.

is properly constructed and fitted for the trade in which she is to engage, is properly fitted with guard rails where required and that, except in the case of Power Driven Small Craft, the machinery space is adequately insulated from the other compartments.

(2) In abnormally constructed vessels, where the surveyor is not satisfied that the normal freeboard calculation as set out in Rule 119 would suit that type of craft, having regard to the safety of the vessel, he shall transmit the facts of the case along with his recommendations to the Minister, who will, if he thinks fit, assign a special freeboard to suit the case.

121. The Government Inspector of Shipping may exempt any inland waters ship from full compliance with these rules, to the extent to which he is satisfied that compliance therewith is unreasonable or impracticable in the circumstances.

122. Anything required to be done by the Minister under these Rules may be done by the Government Inspector of Shipping acting on the Minister's behalf.

## FIRST SCHEDULE

### FEES

1. SEA-GOING SHIPS. SEE FEES REGULATIONS PART VI

2. INLAND WATERS VESSELS.

As the survey of inland waters vessels will normally be carried out at the same time as the survey for the issue of a Passenger and/or Safety Certificate or a Power Driven Small Craft Licence, no separate fee will be charged. Where, however, for any reason, the survey for load line is carried out separately from the other surveys the following fees will be charged—

| *Type of vessel* | *Fee* |
|---|---|
| | £ s d |
| All Power Driven Small Craft .. .. .. | 1 5 0 |
| *Other Vessels* | |
| Under 20 tons .. .. .. .. .. .. | 10 0 0 |
| 20 and under 50 tons .. .. .. .. .. | 12 10 0 |
| 50 „ „ 100 „ .. .. .. .. .. | 17 10 0 |
| 100 „ „ 300 „ .. .. .. .. .. | 25 0 0 |
| 300 „ „ 600 „ .. .. .. .. .. | 31 5 0 |
| 600 and above .. .. .. .. .. .. | 37 10 0 |

| Gross Tonnage | Classed Ships — Fees | | | Unclassed Ships — Fees | | |
|---|---|---|---|---|---|---|
| | (1) Issue | (2) Re-newal | (3) Annual Survey | (4) Issue | (5) Re-newal | (6) Annual Survey |
| | £ | £ | £ | £ | £ | £ |
| Under 50 tons | 11 | 5 | 5 | 25 | 25 | 4 |
| 50 and under 100 | 12 | 5 | 5 | 47 | 47 | 8 |
| 100 „ „ 300 | 19 | 5 | 5 | 62 | 62 | 8 |
| 300 „ „ 500 | 25 | 9 | 9 | 86 | 86 | 11 |
| 500 „ „ 1,000 | 31 | 11 | 11 | 116 | 116 | 16 |
| 1,000 „ „ 1,500 | 39 | 14 | 14 | 150 | 150 | 20 |
| 1,500 „ „ 2,000 | 44 | 15 | 15 | 172 | 172 | 24 |
| 2,000 „ „ 2,500 | 49 | 17 | 17 | 196 | 196 | 24 |
| 2,500 „ „ 3,000 | 54 | 19 | 19 | 219 | 219 | 27 |
| 3,000 „ „ 4,000 | 57 | 20 | 20 | 242 | 242 | 31 |
| 4,000 „ „ 5,000 | 64 | 20 | 20 | 266 | 266 | 31 |
| 5,000 „ „ 6,000 | 69 | 20 | 20 | 290 | 290 | 31 |
| 6,000 „ „ 7,000 | 74 | 21 | 21 | 312 | 312 | 31 |
| 7,000 „ „ 8,000 | 77 | 21 | 21 | 336 | 336 | 31 |
| 8,000 „ „ 9,000 | 80 | 22 | 22 | 360 | 260 | 31 |
| 9,000 „ „ 10,000 | 82 | 24 | 24 | 384 | 384 | 31 |
| 10,000 tons and above | 82 | 24 | 24 | £24 for every additional 1,000 tons | £24 for every additional 1,000 tons | 31 |

## Variations of Standard Fees

(1) For every annual survey of any ship over 300 tons (classed or unclassed) which is carried through in one operation there shall be paid—

(*a*) the standard fee, and

(*b*) in addition, a single fee of £8-0*s* if, for the purposes of the survey, more than one visit is paid to the ship by the surveyor.

(2) For every annual survey of any ship (classed or unclassed) which is not carried through in one operation there shall be paid—

(*a*) the standard fee,

(*b*) in addition, a fee of £8-0*s* for every partial annual survey, and

(*c*) for any ship over 300 tons, in addition, a single fee of £15 for every partial annual survey in respect of which, for the purposes of the partial annual survey, more than one visit is paid to the ship by the surveyor.

(3) In the case of a survey of a classed ship for renewal of the Load Line Certificate, the fee in column (2) shall be paid if the renewal is carried out concurrently with a Special Survey for classification purposes, for which a fee is charged. Otherwise the fee will be 50 per cent of that in column (1).

(4) Where the survey for the issue or renewal of a Load Line Certificate is carried out by a Ministry surveyor concurrently with that for a Passenger and Safety Certificate, and the ship is—

(*a*) a classed ship—no fee will be charged under column (1) or column (2);

(*b*) an unclassed ship—half the fee under column (4) or column (5) shall be paid.

(5) Where the annual load line survey is made by a Ministry surveyor at the same time as the survey for the issue of a Passenger or Passenger and Safety Certificate, no fee will be charged under column (3) or column (6).

(6) Where minor alterations have been made to a ship having a Load Line Certificate in force, which involve an alteration of the freeboard but do not require a full survey, the fee in column (2) shall be paid whether the ship be classed or unclassed.

(7) Where for special reasons a partial survey is made and a certificate is issued or renewed for a period not exceeding twelve months, one-half of the standard fee appropriate to a full survey shall be paid.

*Rule* 15

## SECOND SCHEDULE

### Forms of Load Line Certificates

Form M. of T.—LL.1

### International Load Line Certificate

Issued under the authority of the Federal Government of Nigeria, under the provisions of the International Load Line Convention, 1930

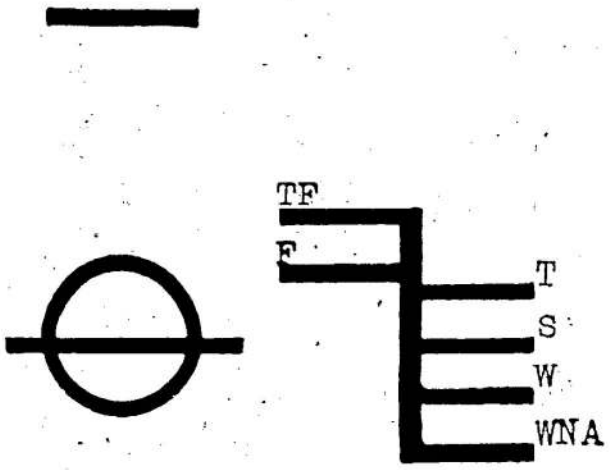
Ship's Name Official Number

Port of Registry

Gross Tonnage

| | Freeboard from Deck Line | | Load Line |
|---|---|---|---|
| Tropical | feet | inches (T) | inches above S. |
| Summer | feet | inches (S) | Upper edge of line through centre of disc. |
| Winter | feet | inches (W) | inches below S. |
| Winter North Atlantic | feet | inches (WNA) | inches below S. |
| Allowance for Fresh Water for all freeboards | | | inches. |

The upper edge of the deck line from which these freeboards are measured is inches above the top of the deck at side.




This is to certify that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Convention.

This Certificate remains in force until

Issued at on the day of 19

Signature and description.

*Note*—Where sea-going steamers navigate a river or inland water, deeper loading is permitted corresponding to the weight of fuel, etc., required for comsumption between the point of departure and the open sea.

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

The provisions of the Convention being fully complied with by this ship, this Certificate is renewed till.

Place

Date 19 . Signature and description.

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

NOTES

1. This Certificate must be kept framed and posted up in some conspicuous part of the ship so long as it remains in force, and the ship is in use.

2. The Winter North Atlantic load line applies for voyages across the North Atlantic, North of Latitude 36° N., during the winter months as defined by the Load Line Rules. The periods during which the other seasonal load lines apply in different parts of the world are as stated in the Load Line Rules.

3. This Certificate will be cancelled by the Minister if—

(*a*) material alterations have taken place in the hull or superstructures of the ship which affect the position of the load lines, or

(*b*) the fittings and appliances for the protection of openings, the guard rails, the freeing ports or the means of access to the crew's quarters have not been maintained on the ship in as effective a condition as they were in when the Certificate was issued ; or

(*c*) the periodical survey is not made as required by the Load Line Rules.

4. Where this Certificate has expired or been cancelled, it must be delivered up to the Assigning Authority and the ship may be detained until such requirement has been complied with, and if any owner or master fails without reasonable cause to comply with such requirement, he shall for each offence be liable to a fine not exceeding one hundred pounds.

*Appliances for closing access openings in bulkheads at ends of detached superstructures*

| | |
|---|---|
| Forecastle .. .. .. .. | |
| Bridge Fore End .. .. .. | |
| Bridge After End .. .. .. | |
| Raised Quarter Deck .. .. | |
| Poop .. .. .. .. | |

*Temporary appliances for closing openings in superstructure decks*

Form M. of T.—L.L.2

INTERNATIONAL LOAD LINE CERTIFICATE

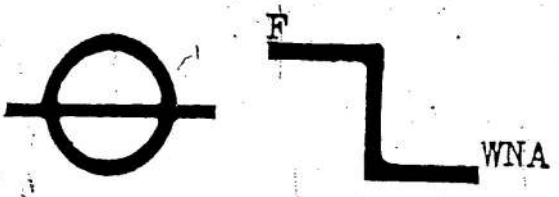
Issued under the authority of the Federal Government of Nigeria, under the provisions of the International Load Line Convention, 1930

Ship's Name Official Number
Port of Registry
Registered Tonnage

| | Freeboard from Deck Line | Load Line |
|---|---|---|
| Tropical<br>Summer<br>Winter | feet inches | Upper edge of line through centre of disc. |
| Winter North Atlantic | feet inches (WNA) | inches below Upper edge of line through centre of disc |

Allowance for fresh water for all freeboards inches

The upper edge of the deck line from which these freeboards are measured is inches above the top of the deck at side.




This is to certify that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Convention.

This Certificate remains in force until

Issued at on the day of 19 .

Signature and description.

*Note.*—Where sea-going steamers navigate a river or inland water, deeper loading is permitted corresponding to the weight of fuel, etc., required for consumption between the point of departure and the open sea.

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

The provisions of the Convention being fully complied with by this ship, this Certificate is renewed until

Place

Date 19 . Signature and description.

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

NOTES

1. This Certificate must be kept framed and posted up in some conspicuous part of the ship so long as it remains in force, and the ship is in use.

2. The Winter North Atlantic load line applies for voyages across the North Atlantic, North of latitude 36° N., during the winter months as defined in the Load Line Rules. The upper edge of the line through the centre of the disc applies for all other voyages.

3. This Certificate will be cancelled by the Minister if—

(*a*) material alterations have taken place in the hull or superstructures of the ship which affect the position of the load lines ; or

(*b*) the fittings and appliances for the protection of openings, the guard rails, the freeing ports or the means of access to the crew's quarters have not been maintained on the ship in as effective a condition as they were when the Certificate was issued ; or

(*c*) the periodical survey was not made as required by the Load Line Rules.

4. Where this Certificate has expired or been cancelled, it must be delivered up to the Assigning Authority and the ship may be detained until such requirement has been complied with, and if any owner or master fails without reasonable cause to comply with such requirement, he shall for each offence be liable to a fine not exceeding one hundred pounds.

*Appliances for closing access openings in bulkheads at ends of detached superstructures*

| | |
|---|---|
| Forecastle .. .. .. | |
| Bridge Fore End .. .. .. | |
| Bridge After End .. .. .. | |
| Raised Quarter Deck .. .. | |
| Poop .. .. .. .. | |
| | |

*Temporary appliances for closing openings in superstructure decks*

INTERNATIONAL LOAD LINE CERTIFICATE

Issued under the authority of the Federal Government of Nigeria, under the provisions of the International Load Line Convention, 1930

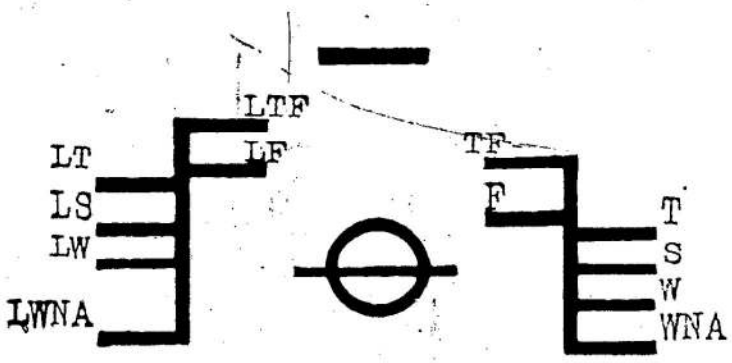
Ship's Name Official Number
Port of Registry
Gross Tonnage

| Freeboard from Deck Line | | | Load Line |
|---|---|---|---|
| Tropical | feet | inches (T) | inches above S. |
| Summer | feet | inches (S) | Upper edge of line through centre of disc. |
| Winter | feet | inches (W) | inches below S. |
| Winter North Atlantic | feet | inches (WNA) | inches below S. |
| Allowance for fresh water for all freeboards :— | | | inches. |

The following load lines are applicable only when the ship is carrying a timber deck cargo and complies with all the provisions of the Timber Cargo Regulations --

| Freeboard from Deck Line | | | Load Line |
|---|---|---|---|
| Tropical (Timber) | feet | inches (LT) | inches above LS. |
| Summer (Timber) | feet | inches (LS) | inches above S. |
| Winter (Timber) | feet | inches (LW) | inches below LS. |
| Winter North Atlantic. (Timber) | feet | inches (LWNA) | inches below LS. |

The upper edge of the deck line from which these freeboards are measured is inches above the top of the deck at side.




This is to certify that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Convention.

This Certificate remains in force until

Issued at on the day of 19 .

Signature and description

*Note*—Where sea-going steamers navigate a river or inland water, deeper loading is permitted corresponding to the weight of fuel, etc., required for consumption between the point of departure and the open sea.

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

The provisions of the Convention being fully complied with by this ship, this Certificate is renewed until

Place

Date . 19 . Signature and description.

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

NOTES

1. This Certificate must be kept framed and posted up in some conspicous part of the ship so long as it remains in force, and the ship is in use.

2. The Winter North Atlantic load lines apply for voyages across the North Atlantic, North of Latitude 36°N, during the winter months as defined in the Load Line Rules. The periods during which the other seasonal load lines apply in different parts of the world are as stated in the Load Line Rules.

3. This Certificate may be cancelled by the Minister if—

(*a*) material alterations have taken place in the hull or superstructures of the ship which affect the position of the load lines ; or

(*b*) the fittings and appliances for the protection of openings, the guard rails, the freeing ports or the means of access to the crew's quarters have not been maintained on the ship in as effective a condition as they were in when the Certificate was issued ; or

(*c*) the periodical survey is not made as required by the Load Line Rules.

4. Where this Certificate has expired or been cancelled, it must be delivered up to the Assigning Authority and the ship may be detained until such requirement has been complied with, and if any owner or master fails without reasonable cause to comply with such requirement, he shall for each offence be liable to a fine not exceeding one hundred pounds.

*Appliances for closing access openings in bulkheads at ends of detached superstructures*

| | |
|---|---|
| Forecastle .. .. .. .. | |
| Bridge Fore End .. .. .. | |
| Bridge After End .. .. .. | |
| Raised Quarter Deck .. .. | |
| Poop .. .. .. .. | |
| | |
| | |

*Temporary appliances for closing openings in superstructure decks*

| |
|---|
| |
| |
| |
| |

**Form M. of T.—LL.3**

NIGERIAN LOAD LINE CERTIFICATE

Issued under the authority of the Minister of Transport

Ship's Name ..... Official Number .....

Port of Registry .....

Gross Tonnage .....

| *Freeboard from Deck Line* | | | *Load Line* |
|---|---|---|---|
| Tropical | feet | inches (T) | inches above S |
| Summer | feet | inches (S) | Upper edge of line through centre of disc. |
| Winter | feet | inches (W) | inches below S. |
| Winter North Atlantic | feet | inches (WNA) | inches below S. |
| Allowance for fresh water for all freeboards | | | inches. |

The upper edge of the deck line from which these freeboards are measured is ..... inches above the top of the ..... deck at side.

This is to certify that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Merchant Shipping Act, (Nigeria) 1962.

This Certificate remains in force until .....

Issued at ..... on the ..... day of ..... 19 .

*Signature and Description*

*Note.*—Where sea-going steamers navigate a river or inland water, deeper loading is permitted corresponding to the weight of fuel etc., required for consumption between the point of departure and the open sea.

NOTES

1. This Certificate must be kept framed and posted up in some conspicuous part of the ship so long as it remains in force, and the ship is in use.

2. The Winter North Atlantic load line applies for voyages across the North Atlantic, North of Latitude 36° N., during the winter months as defined in the Load Line Rules. The periods during which the other seasonal load lines apply in different parts of the world are as stated in the Load Line Rules.

3. This Certificate will be cancelled by the Minister if,

(*a*) material alterations have taken place in the hull or superstructures of the ship which affect the position of the load lines ; or

(*b*) the fittings and appliances for the protection of openings, the guard rails, the freeing ports or the means of access to the crew's quarters have not been maintained on the ship in as effective a condition as they were when the Certificate was issued ; or

(*c*) the periodical survey is not made as required by the Load Line Rules.

4. Where this Certificate has expired or been cancelled, it must be delivered up to the Assigning Authority and the ship may be detained until such requirement has been complied with, and if any owner or master fails without reasonable cause to comply with such requirement, he shall for each offence be liable to a fine not exceeding one hundred pounds.

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the pupose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

The Survey of this ship for the renewal of the Load Line Certificate having been satisfactorily completed in accordance with the Load Line Rules, this Certificate is renewed until.

Place .....

Date ..... 19 ..... *Signature and description*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

Signature of Surveyor ..... Place ..... Date .....

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction

Signature of Surveyor ..... Place ..... Date .....

---

| *Appliances for closing access openings in bulkheads at ends of detached superstructures* | |
|---|---|
| Forecastle .. .. .. | ..... |
| Bridge Fore End .. .. | ..... |
| Bridge After End .. .. | ..... |
| Raised Quarter Deck .. | ..... |
| Poop .. .. .. | ..... |
| | ..... |
| | ..... |

Temporary appliances for closing openings in superstructure decks.

.....

.....

.....

Form M. of T.—LL. 4

NIGERIAN LOAD LINE CERTIFICATE
Issued under the authority of the Minister of Transport

Ship's Name Official Number
Port of Registry
Registered Tonnage

| *Freeboard from Deck Line* | | *Load Line* |
|---|---|---|
| Tropical, Summer, Winter | feet inches | Upper edge of line through centre of disc. |
| Winter North Atlantic | feet inches (WNA) | inches below upper edge of line through centre of disc. |

Allowance for fresh water for all freeboards :— inches.
The upper edge of the deck line from which these freeboards are measured is inches above the top of the deck at side.

This is to certify that this ship has been surveyed and the freeboards and load lines shown above have been assigned in accordance with the Merchant Shipping Act, (Nigeria) 1962.

This Certificate remains in force until

Issued at on the day of 19

*Signature and description*

*NOTE.*—Where sea-going steamers navigate a river or inland water, deeper loading is permitted corresponding to the weight of fuel, etc., required for consumption between the point of departure and the open sea.

NOTES

1. This Certificate must be kept framed and posted up in some conspicuous part of the ship so long as it remains in force, and the ship is in use.

2. The Winter North Atlantic load line applies for voyages across the North Atlantic, North of Latitude 36 N., during the winter months as defined in the Load Line Rules. The upper edge of the line through the centre of the disc applies for all other voyages.

3. This Certificate will be cancelled by the Minister if —

(*a*) material alterations have taken place in the hull or superstructures of the ship which affect the position of the load lines ; or

(*b*) the fittings and appliances for the protection of openings, the guard rails, the freeing ports or the means of access to the crew's quarters have not been maintained in as effective a condition as they were in when the Certificate was issued ; or

(*c*) the periodical survey is not made as required by the Load Line Rules.

4. Where this Certificate has expired or been cancelled, it must be delivered up to the Assigning Authority and the ship may be detained until such requirement has been complied with, and if any owner or master fails without reasonable cause to comply with such requirement, he shall for each offence be liable to a fine not exceeding one hundred pounds.

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* *Place* *Date*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* *Place* *Date*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* *Place* *Date*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* *Place* *Date*

---

The Survey of this ship for the renewal of the Load Line Certificate having been satisfactorily completed in accordance with the Load Line Rules, this Certificate is renewed until

Place

Date 19

*Signature and description*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* *Place* *Date*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* *Place* *Date*

---

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction

*Signature of Surveyor* *Place* *Date*

I have surveyed this ship for the purpose of seeing whether this Certificate should remain in force and the Survey has been completed to my satisfaction.

*Signature of Surveyor* . *Place* . *Date*

| Appliances for closing access openings in bulkheads at ends of detached superstructures | |
|---|---|
| Forecastle .. .. .. .. | |
| Bridge Fore End .. .. .. | |
| Bridge After End .. .. .. | |
| Raised Quarter Deck .. .. .. | |
| Poop .. .. .. .. .. | |
| | |
| | |

| Temporary appliances for closing openings in superstructures decks. |
|---|
| |
| |
| |
| |
| |

(Rules 112 to 115)

## THIRD SCHEDULE

### Zones and Seasonal Areas

### First Part

### Summer and Tropical Zones

1. The Summer Zone shall consist of the two following areas —

(*i*) the area bounded (*a*) on the north by a line drawn from the east coast of North America along the parallel of 36° N. to Tarifa in Spain; from the east coast of Korea along the parallel of 35° N. to the west coast of Honshiu, Japan; from the east coast of Honshiu along the parallel of 35° N. to long. 150° W., and thence along a rhumb line to the west coast of British Columbia at lat. 55° N., and (*b*) on the south by a line drawn from Cape Catoche in the Yucatan to Cape San Antonio in Cuba; along the south Cuban coast to lat. 20° N., and along the parallel of 20° N. to the west coast of Africa; from the port of Hong Kong along a rhumb

line to the port of Sual (Luzon Island), and along the west coast of the Islands of Luzon, Samar and Leyte to the parallel of 10° N. thence along the parallel of 10° N. to long. 145° E. thence north to latitude 13° N. and thence along the parallel of 13° N. to long. 160° E. thence along the meridian of 160° E. to lat. 25° N. thence along the parallel of 25° N. to long. 130° W. thence south along the meridian of 130° W. to lat. 13° N. thence along the parallel of 13° N. to long. 105° W. thence along a rhumb line to the point lat. 30° N., long. 120° W. and from that point along the meridian to the Californian coast.

(*ii*) the area bounded (*a*) on the north by a line from the east coast of South America along the Tropic of Capricorn to the west coast of Africa; from the east coast of Africa along the parallel of 20° S. to the west coast of Madagascar, thence along the west and north coast of Madagascar to long. 50° E. thence north to lat. 10° S. thence along the parallel of 10° S. to long. 110° E. thence along a rhumb line to Port Darwin, Australia, thence along the north and north-east coast of Australia to lat. 20° S. thence along the parallel of 20° S. to long. 175° E. thence along the meridian of 175° E. to lat. 11° S. thence along the parallel of 11° S. to long. 150° W. thence south along the meridian of 150° W. to lat. 20° S. thence along the parallel of 20° S. to a point where that parrallel meets the rhumb line drawn from lat. 11° S. long. 150° W. to lat. 26° S. long. 75° W. thence along that rhumb line to the latter point and thence along the rhumb line to the west coast of South America at lat. 30° S.; and (*b*) on the south by a line drawn from the east coast of South America along the parallel of 40° S. to long. 56° W. thence along a rhumb line to the point lat. 34° S. long. 50° W. thence along the parallel of 34° S. to the west coast of South Africa; from the east coast of South Africa at lat. 30° S. along a rhumb line to the point lat. 35° 30′ S. long. 118° E., off the South coast of Australia thence along a rhumb line to Cape Grim, Tasmania, thence along the north coast of Tasmania to Eddystone Point thence along a rhumb line to the west coast of South Island, New Zealand, at long. 170° E. thence along the west, south and east coasts of South Island to Cape Saunders thence along a rhumb line to the point lat. 33° S. long. 170° W. and thence along the parallel of 33° S. to the west coast of South America.

2. The Tropical Zone shall consist of—

(*i*) the area being bounded (*a*) on the north by a line drawn from the east coast of South America at lat. 10° N. along the parallel of 10° N. to long. 20° W. thence north along the meridian to lat. 20° N. and thence along the parallel of 20° N. to the west cosat of Africa; from the east coast of Africa at lat. 8° N. along the parallel to the west coast of the Malay Peninsula, following thence the coast of Malaya and Siam to the east of Cochin China atl at. 10° N. thence along the parallel of 10° N. to long. 145° E. thence north along the meridian to lat. 13° N. and thence along the parallel of 13° N. to the west coast of central America; and (*b*) on the south by a line drawn from the east coast of South America along the Tropic of Capricorn to the west coast of Africa; from the east coast of Africa along the parallel of 20° S. to the west coast of Madagascar thence along the west and north coasts of Madagascar to long. 50° E. thence north to lat. 10° S. thence along the parallel of 10° S. to long. 110° E. thence along a rhumb line to Port Darwin, Australia, thence eastwards along the coast of Australia and Wessel Island to Cape Wessel, thence along the parallel of 11° S. to the west side of Cape York; from the east side of Cape York at lat. 11° S. along the parallel of 11° S. to long. 150° W. thence along a rhumb line to the point lat. 26° S. long. 75° W. and thence along a rhumb line to the West coast of South America at Lat. 30° S.

(*ii*) The Suez Canal, the Red Sea and the Gulf of Aden to the westward of the meridian of 45° E. and

(*iii*) The Persian Gulf to the westward of the meridian of 59° E.

NOTES.—(*i*) The following ports are to be treated as being on the boundary between the Summer Zone and the Tropical Zone :—Coquimbo, Port Darwin and Rio de Janeiro.

(*ii*) The port of Fusan (Korea) is to be treated as being on the boundary between the Summer Zone and the area numbered 4 in the Second Part of this Schedule.

(*iii*) The port of Yokohama is to be treated as being on the boundary between the Summer Zone and the area numbered 5 in the Second Part of this Schedule.

(*iv*) The following ports are to be treated as being on the boundary between the Summer Zone and the area numbered 6 in the Second Part of this Schedule : Cape Town, Durban, and Valparaiso.

(*v*) The following ports are to be treated as being on the boundary between the Summer Zone and the area numbered 11 in the Third Part of this Schedule : Hong Kong and Sual.

(*vi*) The following ports are to be treated as being on the boundary between the Tropical Zone and the area numbered 9 in the Third Part of this Schedule : Aden and Berbera.

(*vii*) Saigon is to be treated as being on the boundary between the Tropical Zone and the area numbered 11 in the Third Part of this Schedule.

(*viii*) Mackay is to be treated as being on the boundary between the Summer Zone and the area numbered 14 in the Third Part of this Schedule.

## THIRD SCHEDULE

### SECOND PART

### Seasonal Areas—Summer and Winter

| *Area* | | *Summer Period* | *Winter Period* |
|---|---|---|---|
| *No.* | *Description* | | |
| 1. | The area within and to the northwards of the following line : A line drawn south from the coast of Greenland at long. 50° W to lat. 45° N thence along the parallel of 45° N to long. 15° W thence north to lat. 60° N thence along the parallel of 60° N to the west coast of Norway. Bergen is considered as being on the boundary between this area and area 2 below. | 16th April to 15th October. | 16th October to 15th April. |

# THIRD SCHEDULE

## SECOND PART

### Seasonal Areas—Summer and Winter

| Area | | Summer Period | Winter Period |
|---|---|---|---|
| No. | Description | | |
| 2. | The area north of a line drawn from the east coast of America along the parallel of 36° N to Tarifa in Spain excluding area 1 above but including the Baltic Sea. | 1st April to 31st October. | 1st November to 31st March. |
| 3. | The Mediterranean and the Black Seas. | 16th March to 15th December. | 16th December to 15th March. |
| 4. | The Sea of Japan between the parallels of 35° N and 50° N | 1st March to 30th November. | 1st December to 28/29th February. |
| 5. | The area north of a line drawn from the east coast of Honshiu in Japan along the parallel of 35° N. to long. 150° W and thence along a rhumb line to the west coast of British Columbia at lat. 55° N, but excluding area 4 above. | 16th April to 15th October. | 16th October to 15th April. |
| 6. | The area south of a line drawn from the east coast of South America along the parallel of 40° S to long. 56° W thence along a rhumb line to the point lat. 34° S. long. 50° W. thence along the parallel of 34° S to the west coast of South Africa; from the east coast of South Africa at lat. 30° S. along a rhumb line to the point lat. 35° 30′ S long. 118° E off the south coast of Australia thence along a rhumb line to Cape Grim, Tasmania thence along the north coast of Tasmania to Eddystone Point thence along a rhumb line to the west coast of South Island New Zealand, at long. 170° E thence along the west south and east coasts of South Island to Cape Saunders thence along a rhumb line to the point in lat. 33° S long. 170° W; and thence along the parallel of 33 S to the west coast of South America. | 16th October to 15th April. | 16th April to 15th October. |

## THIRD SCHEDULE

### SECOND PART

### Seasonal Areas—Summer and Winter

| Area | | Summer Period | Tropical Period |
|---|---|---|---|
| No. | Description | | |
| 7. | The area bounded on the north by a line from Cape Catoche in Yucatan to Cape San Antonio in Cuba, along the south Cuban coast to lat. 20° N and along the parallel of 20° N to the point lat. 20° N long. 20° W; on the west by the coast of Central America; on the south by the north coast of South America and by the parallel of 10° N; and on the east by the meridian of 20° W. | 16th July to 31st October. | 1st November to 15th July. |
| 8. | The area of the Arabian Sea north of the parallel of 24° N and east of the meridian of 59° E.<br>Karachi is considered as being on the boundary between this area and area 9 below. | 21st May to 31st July. | 1st August to 20th May. |
| 9. | The area of the Arabian Sea south of the parallel of 24° N, north of the parallel of 8° N and east of the meridian of 45° E. | 21st May to 15th September & 16th October to 30 November. | 1st December to 20th May and 16th September to 15th October. |
| 10. | The area of the Bay of Bengal north of the parallel of lat. 8° N. | 16th April to 15th December. | 16th December to 15th April. |
| 11. | The area of the China Sea, bounded on the west and north by the coast of Indo-China and China to Hong Kong; on the east by a rhumb line to the port of Sual (Luzon Island) and by the west coast of the Islands of Luzon, Samar and Leyte to the parallel of 10° N; and on the south by the parallel of 10° N. | 1st May to 20th January. | 21st January to 30th April. |
| 12. | The area in the North Pacific Ocean bounded on the north by the parallel of 25° N, on the west by the meridian of 160° E; on the south by the parallel of 13° N; and on the east by the meridian of 130° W. | 1st November to 31st March. | 1st April to 31st October. |

## THIRD SCHEDULE

### SECOND PART

Seasonal Areas—Summer and Winter

| *Area* | | *Summer Period* | *Tropical Period* |
|---|---|---|---|
| No. | *Description* | | |
| 13. | The area bounded on the north and east by the coast of California, Mexico and Central America ; on the west by the meridian of 120° W and by a rhumb line from the point lat. 30° N long. 120° W., to the point lat. 13° N long. 105° W ; and on the south by the parallel of 13° N. | 1st July to 31st October & 1st December to 28/29th February. | 1st March to 30th June and 1st to 30th November. |
| 14. | The area in the South Pacific Ocean bounded on the north by the parallel of 11° S. ; on the west by the east coast of Australia ; on the south by the parallel of 20° S , and on the east by the meridian of 175° E , together with the Gulf of Carpentaria south of the parallel of 11° S. | 1st December to 31st March. | 1st April to 30th November. |
| 15. | The area bounded on the west by the meridian of 150° W ; on the south by the parallel of 20° S ; and on the north and east by a rhumb line drawn from the point lat. 11° S long. 150° W to the point lat. 26° S long. 75° W. | 1st December to 28th/29th February. | 1st March to 30th November. |

*APPENDIX I*

## TABLE 1

*(Coamings 24 inches in Height)*

HATCHWAY BEAMS AND FORE-AND-AFTERS FOR SHIPS 200 FEET OR MORE IN LENGTH *

### HATCHWAY BEAMS

| *Breadth of Hatchway* | *Mounting* | *Beams with Fore-and-Afters* — *Spacing Centre to Centre* | | | *Beams without Fore-and-Afters* — *Spacing Centre to Centre* | |
|---|---|---|---|---|---|---|
| | | 6′ 0″ | 8′ 0″ | 10′ 0″ | 4′ 0″ | 5′ 0″ |
| | ins. × ins. × ins. | ins. × ins. | ins. × ins. | ins. × ins. | ins. × ins. | ins. × ins. |
| 10′ 0″ | 3 × 3 × .40A | 11 × .30P | 12 × .32P | 14 × .34P | 9 × .46BP | 10 × .50BP |
| 12′ 0″ | 3 × 3 × .40A | 12 × .32P | 14 × .34P | 17 × .36P | 11 × .50BP | 12 × .50BP |
| 14′ 0″ | 3 × 3 × .42A | 14 × .34P | 17 × .36P | 20 × .38P | 12 × .50BP | 12 × .32P |
| 16′ 0″ | 3½ × 3 × .42A | 16 × .36P | 19 × .38P | 22 × .38P | 12 × .32P | 14 × .34P |
| 18′ 0″ | 4 × 3 × .44A | 18 × .36P | 21 × .38P | 25 × .40P | 14 × .34P | 16 × .36P |
| 20′ 0″ | 4 × 3 × .44A | 20 × .38P | 24 × .40P | 28 × .42P | 15 × .34P | 18 × .36P |
| 22′ 0″ | 4½ × 3 × .46A | 26 × .42P | 26 × .42P | 30 × .44P | 16 × .36P | 19 × .36P |
| 24′ 0″ | 5 × 3½ × .46A | 23 × .40P | 28 × .42P | 32 × .44P | 17 × .36P | 20 × .38P |
| 26′ 0″ | 5½ × 3½ × .48A | 24 × .40P | 29 × .42P | 34 × .46P | 18 × .36P | 21 × .38P |
| 28′ 0″ | 6 × 3½ × .50A | 25 × .40P | 31 × .44P | 36 × .48P | 19 × .38P | 22 × .38P |
| 30′ 0″ | 6 × 3½ × .52A | 26 × .42P | 32 × .44P | 38 × .48P | 20 × .38P | 23 × .40P |

| Length of Fore-and-Afters | Mounting | Bulb Plate Centre Fore-and-Afters — Spacing Centre to Centre | | | | | | Bulb Angle Side Fore-and-Afters — Spacing Centre to Centre | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3′ 0″ | | 4′ 0″ | | 5′ 0″ | | 3′ 0″ | | | 4′ 0″ | | | 5′ 0″ | | |
| | ins. × ins. × ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. |
| 6′ 0″ | 2½ × 2½ × .36 | 6 × .36 | | 6½ × .38 | | 7 × .38 | | 6 × 3 × .36 | | | 6½ × 3½ × .38 | | | 7 × 3½ × .38 | | |
| 8′ 0″ | 2½ × 2½ × .38 | 7 × .42 | | 8 × .44 | | 9 × .44 | | 7 × 3½ × .42 | | | 8 × 3 × .44 | | | 9 × 3½ × .44 | | |
| 10′ 0″ | 2½ × 2½ × .40 | 8 × .50 | | 9½ × .50 | | 11 × .50 | | 8 × 3½ × .50 | | | 9½ × 3½ × .50 | | | 11 × 3½ × .50 | | |

| | Wood Centre Fore-and-Afters — Spacing Centre to Centre | | | | | | Wood Side Fore-and-Afters — Spacing Centre to Centre | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3′ 0″ | | 4′ 0″ | | 5′ 0″ | | 3′ 0″ | | 4′ 0″ | | 5′ 0″ | |
| | D | B | D | B | D | B | D | B | D | B | D | B |
| | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. |
| 6′ 0″ | 5½ | 7 | 6 | 7 | 6½ | 7 | 5½ | 5½ | 6 | 6 | 6½ | 6 |
| 8′ 0″ | 6½ | 7 | 7½ | 7 | 8 | 7 | 6½ | 6½ | 7½ | 7 | 8 | 7 |
| 10′ 0″ | 8 | 7 | 8½ | 8 | 9 | 9 | 8 | 7 | 8½ | 8 | 9 | 9 |

A Plain angle. BP Bulb Plate. P Plate. D Depth. B Breadth.

Depths for hatchway beams are at the middle of the length and are measured from the top mounting to the lower edge. Depths for fore-and-afters are measured from the under side of the hatch covers to the lower edge. Sizes for intermediate lengths and spacing are obtained by interpolation. Where plates are specified, two angles, of the size given for mountings, are to be fitted at the upper and at the lower part of the beam. Where bulb plates are specified, two angles, of the size given for mountings, are to be fitted at the upper part of the beam or fore-and-after. Where bulb angles are specified, one angle, of the size given for mountings, is to be fitted at the upper part of the section. Where the specified flanges of an angle are of different dimensions, the larger flange is to be horizontal.

*In ships not exceeding 100 feet in length, the depths of beams which are formed of plates and angles may be 60 per cent of the depths given above; the depths of beams and steel fore-and-afters formed of bulb angle or bulb plate section may be 80 per cent of the depths given above; the thickness of plates, bulb angles and bulb plates should correspond to the thickness tabulated for the reduced depths with a minimum thickness of .30 inch; the depths and breadths of wood fore-and-afters may be 80 per cent of those given in the tables for side fore-and-afters, but the centre fore-and-afters must be not less than 6½ inches wide. In ships between 100 feet and 200 feet in length, the sizes of the beams and fore-and-afters are to be determined by linear interpolation.

## TABLE 2

(Coamings 18 inches in Height)

HATCHWAY BEAMS AND FORE-AND-AFTERS FOR SHIPS 200 FEET OR MORE IN LENGTH*

### HATCHWAY BEAMS

| *Breadth of Hatchway* | *Mounting* | *Beams with Fore-and-Afters* — *Spacing Centre to Centre* | | | *Beams without Fore-and-Afters* — *Spacing Centre to Centre* | |
|---|---|---|---|---|---|---|
| | | 6′ 0″ | 8′ 0″ | 10′ 0″ | 4′ 0″ | 5′ 0″ |
| | *ins.* × *ins.* × *ins.* | *ins.* × *ins.* | *ins.* × *ins.* | *ins.* × *ins.* | *ins.* × *ins.* | *ins.* × *ins.* |
| 10′ 0″ | 3 × 3 × .40A | 9½ × .46BP | 10½ × .50BP | 11½ × .52BP | 8 × .40BP | 9 × .44BP |
| 12′ 0″ | 3 × 3 × .40A | 11 × .50BP | 11 × .30P | 13 × .34P | 9 × .44BP | 10 × .50BP |
| 14′ 0″ | 3 × 3 × .42A | 11 × .30P | 13 × .32P | 15 × .34P | 10 × .50BP | 11½ × .50BP |
| 16′ 0″ | 3½ × 3 × .42A | 12 × .32P | 15 × .34P | 17 × .36P | 11 × .30P | 11 × .30P |
| 18′ 0″ | 4 × 3 × .44A | 14 × .34P | 17 × .36P | 19 × .38P | 11 × .30P | 12 × .32P |
| 20′ 0″ | 4 × 3 × .44A | 16 × .36P | 19 × .38P | 21 × .38P | 12 × .32P | 13 × .34P |
| 22′ 0″ | 4½ × 3 × .46A | 17 × .36P | 20 × .38P | 23 × .40P | 12½ × .32P | 14 × .34P |
| 24′ 0″ | 5 × 3½ × .46A | 18 × .36P | 21 × .38P | 25 × .40P | 13 × .34P | 14½ × .34P |
| 26′ 0″ | 5½ × 3½ × .48A | 19 × .38P | 22 × .38P | 26 × .42P | 13½ × .34P | 15 × .34P |
| 28′ 0″ | 6 × 3½ × .50A | 20 × .38P | 23 × .40P | 27 × .42P | 14 × .34P | 16 × .36P |
| 30′ 0″ | 6 × 3½ × .52A | 21 × .38P | 24 × .40P | 28 × .42P | 15 × .34P | 17 × .36P |

## Fore-and-Afters

| Length of Fore-and-Afters | Mounting | Bulb Plate Centre Fore-and-Afters — Spacing Centre to Centre | | | | | | Bulb Angle Side Fore-and-Afters — Spacing Centre to Centre | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 3′ 0″ | | 4′ 0″ | | 5′ 0″ | | 3′ 0″ | | 4′ 0″ | | | 5′ 0″ | | | |
| | ins. ins. ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. |
| 6′ 0″ | 2½ × 2½ × .36 | 5 | × .34 | 5½ | × .34 | 6 | × .36 | 5 | × 3 × .34 | 5½ | × 3 | × .34 | 6 | × 3 | × .36 | |
| 8′ 0″ | 2½ × 2½ × .38 | 6 | × .38 | 7 | × .40 | 7½ | × .42 | 6 | × 3 × .38 | 7 | × 3 | × .40 | 7½ | × 3½ | × .42 | |
| 10′ 0″ | 2½ × 2½ × .40 | 7 | × .44 | 8 | × .46 | 9 | × .50 | 7 | × 3 × .44 | 8 | × 3½ | × .46 | 9 | × 3½ | × .50 | |

| | Wood Centre Fore-and-Afters — Spacing Centre to Centre | | | | | | Wood Side Fore-and-Afters — Spacing Centre to Centre | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3′ 0″ | | 4′ 0″ | | 5′ 0″ | | 3′ 0″ | | 4′ 0″ | | 5′ 0 | |
| | D | B | D | B | D | B | D | B | D | B | D | B |
| | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. |
| 6′ 0″ | 5 | 7 | 5½ | 7 | 6 | 7 | 5 | 5 | 5½ | 5 | 6 | 5 |
| 8′ 0″ | 6 | 7 | 6½ | 7 | 7 | 7 | 6 | 5 | 6½ | 6 | 7 | 6 |
| 10′ 0″ | 7 | 7 | 7½ | 7 | 8 | 7 | 7 | 6 | 7½ | 7 | 8 | 7 |

A = Plain Angle  BP = Bulb Plate  P = Plate  D = Depth  B = Breadth.

Depths for hatchway beams are at the middle of the length and are measured from the top mounting to the lower edge. Depths for fore-and-afters are measured from the under side of the hatch covers to the lower edge. Sizes for intermediate length and spacing are obtained by interpolation. Where plates are specified, two angles, of the size given for mountings, are to be fitted at the upper and the lower part of the beam. Where bulb plates are specified, two angles, of the size given for mountings, are to be fitted to the upper part of the beam or fore-and-after. Where bulb angles, are specified, one angle, of the size given for mountings, is to be fitted at the upper part of the section. Where the specified flanges of an angle are of different dimensions, the larger flange is to be horizontal.

In ships not exceeding 100 feet in length, the depths of beams which are formed of plates and angles may be 60 per cent of the depths given above; the depths of beams and steel fore-and-afters formed of bulb angle or bulb plate section may be 80 per cent of the depths given above; the thickness of plates, bulb angles and bulb plates should correspond to the thickness tabulated for the reduced depths with a minimum thickness of .30 inch; the depths and breadths of wood fore-and-afters may be 80 per cent of those given in the tables for side fore-and-afters, but the centre fore-and-afters must be not less than 6½ inches wide. In ships between 100 feet and 200 feet in length, the sizes of the beams and fore-and-afters are to be determined by linear interpolation.

EXPOSED BULKHEADS OF STANDARD HEIGHT

TABLE 3

EXPOSED BULKHEADS OF SUPERSTRUCTURES OF STANDARD HEIGHT

| *Bridge Front Bulkheads, Unprotected Bulkheads of Poops .4 L or More in length.* | | *Bulkheads of Poops Partially Protected, or Less in Length than .4 L* | | *After Bulkheads of Bridges and Forecastles* | |
|---|---|---|---|---|---|
| *Length of Ship* | *Bulb Angle Stiffeners* | *Length of Ship* | *Plain Angle Stiffeners* | *Length of Ship* | *Plain Angle Stiffeners* |
| Feet | Inches | Feet | Inches | Feet | Inches |
| Under 160 | 5½ x 3 x .30 | Under 150 | 3 x 2½ x .30 | Under 150 | 2½ x 2½ x .26 |
| 160 | 6 x 3 x .32 | 150 | 3½ x 2½ x .32 | 150 | 3 x 2½ x .28 |
| 200 | 6½ x 3 x .34 | 200 | 4 x 3 x .34 | 250 | 3½ x 3 x .30 |
| 240 | 7 x 3 x .36 | 250 | 4½ x 3 x .36 | 350 | 4 x 3 x .32 |
| 280 | 7½ x 3 x .38 | 300 | 5 x 3 x .38 | | |
| 320 | 8 x 3 x .40 | 350 | 5½ x 3 x .42 | | |
| 360 | 8½ x 3 x .42 | 400 | 6 x 3 x .44 | | |
| 400 | 9 x 3 x .44 | 450 | 6½ x 3½ x .46 | | |
| 440 | 9½ x 3½ x .46 | 500 | 7 x 3½ x .48 | | |
| 480 | 10 x 3½ x .48 | 550 | 7 x 3½ x .50 | | |
| 520 | 10½ x 3½ x .50 | | | | |
| 560 | 11 x 3½ x .52 | | | | |
| | Bulkhead Plating | | Bulkhead Plating | | Bulkhead Plating |
| | Inch | | Inch | | Inch |
| 200 and under | .3 | 160 and under | .24 | 160 and under | .20 |
| 380 and above | .44 | 400 and above | .38 | 400 and above | .30 |

For ships intermediate in length the thicknesses of bulkhead plating are obtained by interpolation.

MADE at Lagos the 17th day of September, 1964.

R. A. NJOKU,
*Minister of Transport*

EXPLANATORY NOTE

These Rules lay down the maximum depths to which vessels may be loaded in varying circumstances and include such requirements as appear to the Minister to be necessary to implement the provisions of the International Convention Respecting Load Lines, 1930.

L.N. 109 of 1964

MERCHANT SHIPPING ACT, 1962
1962, No. 30

# Merchant Shipping Act (Delegation of Powers) (Amendment) Notice, 1964

*Commencement : 17th September*, 1964

**In exercise of the powers conferred by section 414 of the Merchant Shipping Act, 1962, and of all other powers enabling me in that behalf I hereby give the following notice**

1. This Notice may be cited as the Merchant Shipping Act (Delegation of Powers) (Amendment) Notice, 1964. Citation

2. The Schedule to the Merchant Shipping Act (Delegation of Powers) Notice 1963 is hereby amended by the insertion, immediately after paragraph 93, of the following new paragraphs :— Amendment of L.N. 112 of 1963

| | | | |
|---|---|---|---|
| "94. | To give consent in writing on such terms and conditions as may be necessary | Section 331 | Government Inspector of Shipping |
| 95. | To give consent in writing on such terms and conditions as may be necessary | Section 345(3) | Government Inspector of Shipping" |

MADE in Lagos this 17th day of September, 1964.

R. A. NJOKU,
*Minister of Transport*