

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. 34601
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having raised quarter-deck, bridge and forecastle.

(Type of Superstructures.)

Port of Survey _____

Date of Survey 27-11-34

Name of Surveyor _____

Particulars of Classification 100 A1
(Contemplated)

Ship's Name R. W. Hawthorn, Leslie & Co. Ltd.
N. 596 Ship.

Nationality and Port of Registry _____

Official Number _____

Gross Tonnage _____

Date of Build _____

Moulded Dimensions: Length 225.0 Breadth 33.0 Depth 16.5

Moulded displacement at moulded draught = 85 per cent. of moulded depth 2100 tons

Efficient of fineness for use with Tables (.706) .708 (finer)

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Depth ... <u>16.50</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>16.54 - 15.00 = 1.54</u> <u>1.54 × 1.731 = + 2.66</u>	Moulded Breadth (B) <u>33'</u> Standard Round of Beam = $\frac{B \times 12}{50} = \frac{33 \times 12}{50} = 7.92$ Ship's Round of Beam = <u>8.00</u>
er plate ... <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>	Difference <u>.08</u>
ing on exposed deck $\left(\frac{L-S}{L}\right) =$ <u>✓</u>	If restricted by superstructures <u>✓</u>	Restricted to <u>✓</u>
Depth for Freeboard (D) = <u>+ 16.54</u>		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.08}{4} \times .40 = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
oop enclosed ...	99.50	99.50	7.5	-	99.50
" overhang ...					
... Q.D. enclosed ...					
" overhang ...					
ridge enclosed ...	13.50	13.50	7.5	-	13.50
" overhang aft ...					
" overhang forward ...					
" cle enclosed ...	22.00	22.00	7.5	-	22.00
" overhang ...					
trunk aft ...					
" forward ...					
onnage opening aft ...					
" " forward ...					
Total ...	135.00	135.00			135.00

Standard Height of Superstructure 6.0'

" " R.Q.D. 3.833'

Deduction for complete superstructure 28.5"

Percentage covered $\frac{S}{L} = \frac{60.0}{100} = 60.0\%$

" " $\frac{S_1}{L} = \frac{60.0}{100} = 60.0\%$

" " $\frac{E}{L} = \frac{60.0}{100} = 60.0\%$

Percentage from Table, Line A. 46.0

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. ✓

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) ✓

Deduction = 28.5 × 46 = - 13.11

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	32.50	1	✓	32.50	22.00	66.00	1	✓	66.00
om A.P. ...	14.46	4	✓	57.84	9.79	29.37	4	✓	117.48
" ...	3.575	2	✓	7.15	2.42	7.26	2	✓	14.52
ships ...	-	4		-	-	-	4		-
om F.P. ...	7.15	2	✓	14.30	7.15	7.15	2	✓	14.30
" ...	28.92	4	✓	115.68	28.92	28.92	4	✓	115.68
... ..	65.00	1	✓	65.00	65.00	65.00	1	✓	65.00
Total ...	292.5			292.47					392.98

Mean actual sheer aft = Excess.

Mean standard sheer aft = Standard.

Mean actual sheer forward = Standard.

Mean standard sheer forward = Standard.

Length of enclosed superstructure forward of amidships = .002L

" " aft of " = .5L

Correction = $\frac{\text{Difference between sums of products}}{18}$

If limited on account of midship superstructure.

$$\left(\frac{.75 - S}{2L}\right) = \frac{100.51 - 30}{18} = -2.51$$

If limited to maximum allowance of 1½ ins. per 100 ft. ✓

Correction for Tropical Freeboard.

Correction for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 16.56

Summer freeboard = 1.39

Moulded draught (d) = 15.17

Correction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.79

Correction for Winter North Atlantic Freeboard (if required) = 3¾ + 2 = 5¾

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = 2114

Tons per inch immersion at summer load water line

T = 14

Deduction = $\frac{\Delta}{40T}$ inches

= 3.77

= 3¾

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{.708 + .68}{1.36} = \frac{1.388}{1.36} = 1.02$$

Depth Correction ... 2.66

Deduction for superstructures ... 13.11

Sheer correction ... 1.28

Round of Beam correction ... 0.01

Correction for Thickness of Deck amidships ... 0.24

Other corrections, scantlings, etc. ... ✓

Summer Freeboard = 16.62

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ... 7½"

Fresh Water Line " " ... 3¾"

Tropical Line " " ... 3¾"

Winter Line below " " ... 3¾"

Winter North Atlantic Line " " ... 5¾"

Tropical Fresh Water Freeboard ... 0'-9¼"

Fresh Water " " ... 1'-1"

Tropical " " ... 1'-1"

Winter " " ... 1'-8½"

Winter North Atlantic " " ... 1'-10½"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway										
Dimensions of Hatchway										
COAMINGS	{	Height above Deck								
		Thickness { Sides								
		{ Ends								
		Stiffeners								
		Brackets, Stays								
HATCH BEAMS	{	Number								
		Spacing								
		Scantling and Sketch								
		Bearing Surface								
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths								
		Scantling* and Sketch								
		Bearing Surface								
HATCH COVERS	{	Material								
		Thickness								
		How fitted								
		Bearing Surface								
Spacing of Cleats										
Number of Tarpaulins										

*Are wood fore and afters steel shod at all bearing surfaces ?

Are battens and wedges efficient and in good condition ?

Are tarpaulins in good condition and in accordance with rule requirements ?

Are lashings provided in accordance with rule requirements ?

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

Particulars of Companionways :—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of Gangway Cargo and Coaling Ports:—

Particulars of Scuppers and Sanitary Discharge Pipes :—

Particulars of Side Scuttles:—

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. :—

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well						
Forward Well						

State position of each freeing port { After Well :—
(F, and A. position and height above deck edge) { Forward Well :—

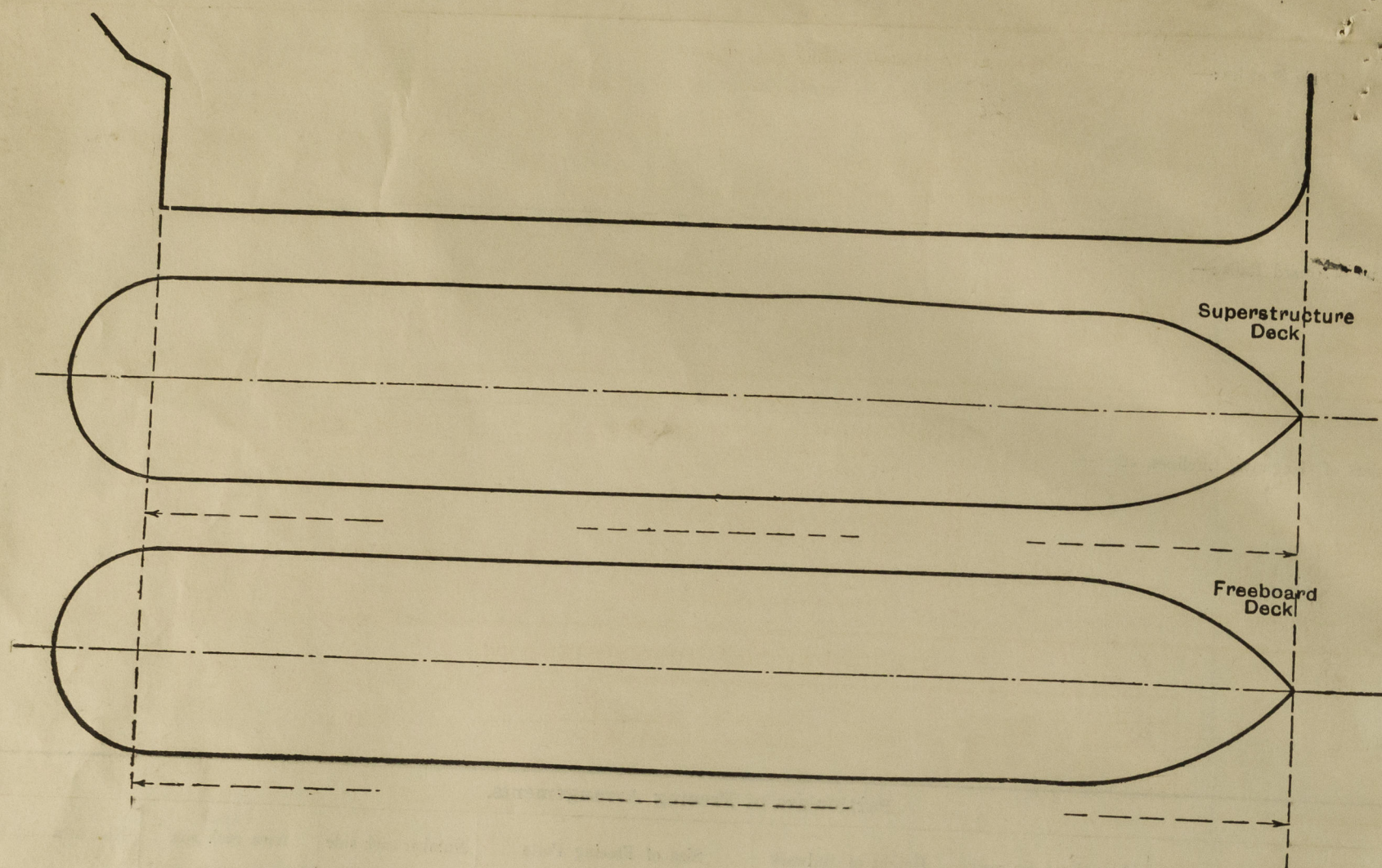
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :—

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships ...								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).			
Poop Bulkhead	...	...	...
Raised Quarter Deck Bulkhead	...		
Bridge, After Bulkhead	...	...
Bridge, Forward Bulkhead	...	...
Forecastle Bulkhead	...	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...		
Exposed Machinery Casings on Superstructure Decks	...	...
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	...
Deckhouses on Flush Deck Ships	...		

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

Builder's name and yard number

Names of sister ships

Owners

Fee £

Received by me



© 2020

Lloyd's Register
Foundation