

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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 Cambair 29402

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having **Forecastle Bridge & Raised Quarter Deck**Port of Survey **London****RORA HEAD**

(Type of Superstructures.)

Date of Survey **6th July 1932.**

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

BLACKCOCK.**British****146147****492.****1921-10**Name of Surveyor **Thomas E. Sowden**Moulded Dimensions: Length **165.25** Breadth **25.5** Depth **12'**

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

Coefficient of fineness for use with Tables

Particulars of Classification **+100 A.1.****S.S. Lon. No. 2-29**

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 12.00	(a) Where D is greater than Table depth (D—Table depth) R = (12.00 - 11.02) 1.271 = +1.30	Moulded Breadth (B) 25.5
Stringer plate 36.00 ... .. .04	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{6.12}{50}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = $\frac{6.00}{12}$ deficient
Depth for Freeboard (D) = 12.04		Difference
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.12}{4} \times .227 = +.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed	95'-0"	95.00	3'-0	3.0/2.435	82.98
" overhang					
Bridge enclosed... ..	10'-10"	10.83	7'-0		10.83
" overhang aft					
" overhang forward	24'-7.7	20.79	7'-0		20.79
F'cle enclosed	19'-6"	1.11			1.11
" overhang	3'-2.21				
Trunk aft					
" forward					
Tonnage opening aft ...					
" " forward					
Total	128.83	127.73			115.71

Standard Height of Superstructure	6'-00
" " R.Q.D.	3.435
Deduction for complete superstructure	22.52
Percentage covered $\frac{S}{L} =$	77.96%
" " $\frac{S_1}{L} =$	77.30%
" " $\frac{E}{L} =$	40.02%
Percentage from Table, Line A.	63.02%
(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 = 22.52 x .6302 = 14.19	

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P.	26.53	1	26.53	27	27.00	1	27.00
$\frac{1}{2}$ L from A.P.	11.81	4	47.24	8	7.00	4	28.00
$\frac{3}{8}$ L " "	2.92	2	5.84	2	.80	2	1.60
Amidships		4				4	
$\frac{3}{8}$ L from F.P.	5.84	2	11.68	4	.60	2	1.20
$\frac{1}{2}$ L " "	23.62	4	94.48	16	13.30	4	53.20
F.P.	53.06	1	53.06	57	57.00	1	57.00
Total			238.83				168.00

Mean actual sheer aft = **deficient**Mean standard sheer aft = **deficient**Length of enclosed superstructure forward of amidships = **> .10**aft of " = **> .10**Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{70.83}{18} \left(.75 - \frac{.3898}{2} \right) = +1.42$

If limited on account of midship superstructure.

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.Depth to **R.Q.** Deck = **15.04**Summer freeboard = **3.54**Moulded draught (d) = **11.50**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **2.875 = 2.8**

Addition for Winter North Atlantic Freeboard (if

required) = **2**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta =$ **1072**

Tons per inch immersion at summer load water line

T = **8.58**Deduction = $\frac{\Delta}{40T}$ inches= **2.95**= **3"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.68 + 7.12}{1.36} = \frac{1.392}{1.36}$ Depth Correction **1.30**Deduction for superstructures **14.19**Sheer correction **1.42**Round of Beam correction **.01**Correction for Thickness of Deck amidships **36.00**

Other corrections, scantlings, etc.

38.73**14.19****+ 24.54**Summer Freeboard = **42.59**

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

Tropical Fresh Water Line above Centre of Disc **5.34**Fresh Water Line " " **3**Tropical Line " " **2.34**Winter Line below " " **2.34**Winter North Atlantic Line " " **4.34**Tropical Fresh Water Freeboard **3.62**Fresh Water " " **3.03**Tropical " " **3.34**Winter " " **3.94**Winter North Atlantic " " **3.14**

" RORA HEAD

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

None. ✓

Particulars of Companionways :—

1 on Br. to Acc^m in Steel House with hinged wood door 5'x22", 6" sill, Operated from both sides.

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

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

Forecastle:- 2 at 6' x 36" high to Acc ^m ✓ 2 at 5' x 30" " " " " ✓	Bridge:- 3 at 6' x 8' high M.R's to Acc ^m . ✓
Fore Well:- 1 at 9' x 46" " to hold (protected) ✓	R.Q.D 1 at 10' x 36" " to hold ✓ 2 at 4' x 13" " " Bunkers ✓

Ventilators fitted with wood plugs & canvas covers ✓

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

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

Forecastle:—	1 @ 3" x 6" high	R. Q. D.	4 @ 3" x (21)" high	to D.B.
Fore Well:—	2 @ 3" x 18" high		1 @ 4" x (9)"	" " A.P.

Effect of
~~to~~ means of closing air pipes provided.

Particulars of Gangway Cargo and Coaling Ports :—

None.

Discharges in File & Bridge led below W.D. & fitted with storm valves.
" Acc^m Aft. " " RQD " " " "

Forecastle & Bridge scuttles fitted with fixed hinged deadlights ✓

⁴ Forecastle rails 3' high, with 2 rods; Stanchions 4' apart. ✓

Fore Well:- Gangway from hatch top to ladders, stanchions in hatch stiffener and S.W.R lifeline & stretching screw fitted. ✓

Crew in Forecastle.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Well	95.0	3'-0"	24' x 18½"	5	17.35	19.0 ✓
Forward Well	36-5.	3'-7"	27' x 18½"	3	10.4	10.1. ✓

State position of each freeing port { After Well:— 1½', 24', 42', 59' & 78' from Bridge; 6½" all.
 (F. and A. position and height above deck edge) { Forward Well:— 5', 17½' & 28½' from bridge; 6½" " .
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
 Hinged plate covers or bars. ✓

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								3'-0
Raised Quarter Deck Bulkhead ...								7'-0
Bridge, After Bulkhead ... ..	.32	.30	4 x 3 x .34 L ₅ 3 x 3 x .26 ALT REV	30	Protac T & B.	—	—	7'-0
Bridge, Forward Bulkhead ... ..	.32	.30	"	30"	Protac T & B.	—	—	7'-0
Forecastle Bulkhead	16 x .30	.26	3 x 3 x .36	30"	none.	2 at 4'9" x 2' 1 at 4'9" x 23"	18" 18"	7'-0
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super- structure Decks	29 x .30	.26	3 x 3 x .36	30	Protacets at top	4 at 4'9" x 2'	18"	6-6
Machinery Casings within Superstruc- tures 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	...	✓ <i>no opening</i>	—
Bridge, After Bulkhead	...	...	—
Bridge, Forward Bulkhead	...	✓ <i>no opening</i>	—
Forecastle Bulkhead	...	...	—
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	—

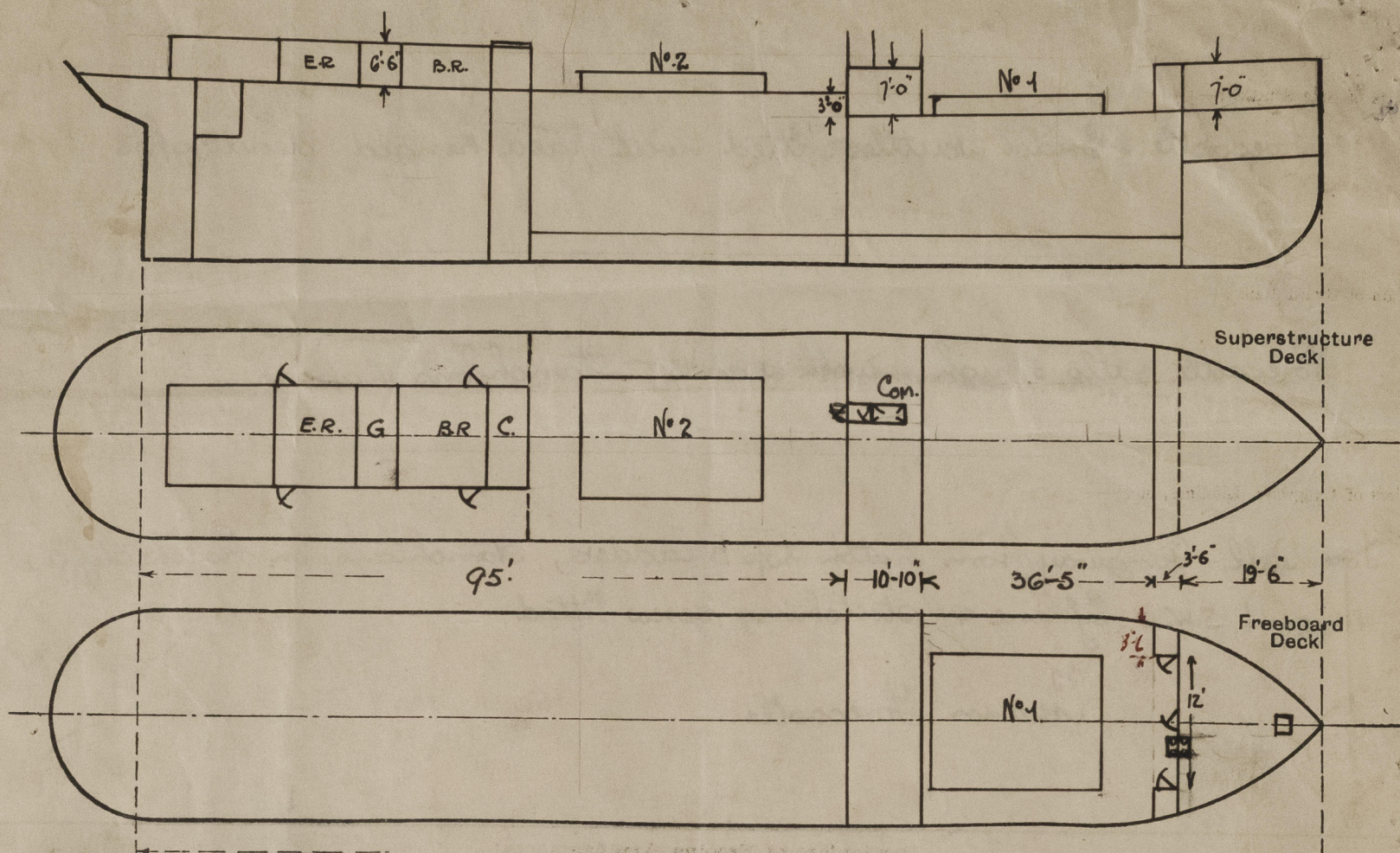
2 hinged steel doors operated from both sides
wood

4 hinged steel doors

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Blackcock

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:—



Draught	Displ.	T. P. 1
11'-5"	989	-
11'-0"	-	8-61
10'-0"	848	8-50
9	-	8-39
8	652	8-27

$$T_{11} = 19.5 + \left(\frac{35 \times 3.5}{9.5} \right) = 20.79$$

$$\text{overhang} = 23 - 20.79 = 2.21$$

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

Small Hatches:—

- 1 Escape Ford 2'-6" x 18" x 24" high with covers battens tarpaulins or ✓
- 1 to Chain Lr 2'-4" x 23" x 15" " " hinged wood cover. ✓
- 1 " Fore Peak. 3' x 3' x 6" " with W.T. hinged steel cover. ✓ ✓
- Coal hatch on Yiddley 5'-6" x 12'-6" x 3" high with covers battens tarpaulins or ✓

This survey was carried out afloat.

Builder's name and yard number Day Summers & Co Ltd No 188.

Names of sister ships S/S Allamwater

Owners General Steam Navigation Co. Ltd

Fee £ 5 : 2 : 0 11/7/32 Received by me



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