

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

No. 100929

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Raisin Darts Deck Bridge & Forecastle Bulk

GLEN SPRAY

HALADATE

Port of Survey Liverpool

Date of Survey Auger 1932

Name of Surveyor R.R. Ruthven

Particulars of Classification 100. A.1.

S.S. No 2-28

Ship's Name "BROOKHILL"

Nationality and Port of Registry British Liverpool

Official Number 143270

Gross Tonnage 305 (241/17)

Date of Build 1921-1M.

Moulded draught 10.6 Length 120.0 Breadth 23.0 Depth 10.6 548

Moulded displacement at moulded draught = 85 per cent. of moulded depth 241.7 tons

Coefficient of fineness for use with Tables .719

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	10.6	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	23.0
Stringer plate	.35	(10.53 - 8.67) × 1.00 = + 1.86		Standard Round of Beam = $\frac{B \times 12}{50}$	5.52
Sheathing on exposed deck	.03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	6
T $\left(\frac{L-S}{L}\right)$ =		If restricted by superstructures		Difference	.48
Depth for Freeboard (D) =	10.53			Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right)$	-.06

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Peep enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	42.50	42.50	3.0	3.0	39.84
" overhang ...					
Bridge enclosed ...	8.75	8.75	7.0	7.0	8.75
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	15.75	15.75	7.0	7.0	15.75
" overhang ...	3.50	1.75			1.75
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	70.50	68.75			66.09

Standard Height of Superstructure 6.00

" " R.Q.D. 3.20

Deduction for complete superstructure 19.00

Percentage covered $\frac{S}{L} = 54.22$

" " $\frac{S_1}{L} = 52.88$

" " $\frac{E}{L} = 50.84$

Percentage from Table, Line A. 33.18

(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 = $19.00 \times .3318 = -6.30$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	23.00	1	23.00	24.5	23.00	1	23.00
$\frac{1}{2}$ L from A.P. ...	10.23	4	40.92	13.0	9.87	4	39.48
$\frac{2}{3}$ L " ...	2.53	2	5.06	5.0	2.47	2	4.94
Amidships ...		4				4	
$\frac{2}{3}$ L from F.P. ...	5.06	2	10.12	2.5	3.36	2	6.72
$\frac{1}{2}$ L " ...	20.47	4	81.88	15.0	13.43	4	53.72
F.P. ...	46.00	1	46.00	34.0	34.00	1	34.00
Total ...			206.98				161.86

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{45.12}{18} \left(.75 - \frac{.4789}{2.711} \right) = + 1.20$

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 Freeboard Deck = 10.53

Summer freeboard = .83

Moulded draught (d) = 9.70

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $2.42 = 2\frac{1}{2}$

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Tons per inch immersion at summer load water line

Deduction = $\frac{\Delta}{40T}$ inches2 $\frac{1}{2}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

13.00

13.38

Summer Freeboard = 10.08

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

Tropical Fresh Water Line above Centre of Disc ...

Fresh Water Line " " ...

Tropical Line " " ...

Winter Line below " " ...

Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

PARTICULARS OF PROTEIN

HATCHWAYS ON FOREBOARD		HATCHWAYS ON AFTERBOARD	
Description of Hatchway	...	1	
Dimensions of Hatchway	...	41'-6" x 14'-0"	
COAMINGS	Height above Deck	3'-6"	
	Thickness	Sides 1 1/2"	
		Ends 1 1/2"	
	Stiffeners	7 x 3 1/2 x 12 Sides	
	Brackets, Stays	3-7" S.P.	
HATCH BEAMS	Number	3	
	Spacing	10'-4 1/2"	
	Scantling and Sketch	PL 20 x 34 angles	
		3 x 3 x 38	
	Bearing Surface	3	
FORE AND AFTERS	Number	3	
	Spacing	3'-6"	
	Unsupported Lengths	9'-10 1/2"	
	Scantling* and Sketch	CH 8 x 7 1/4	
		SILCO 8 1/2 x 7 1/2	
Bearing Surface	3		
HATCH COVERS	Material	W.W.	
	Thickness	2 1/4"	
	How fitted	Shims	
	Bearing Surface	2 Sides CH	
Spacing of Cleats	...	24"	
Number of Tarpaulins	...	2	

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

Are battens and wedges efficient and in good condition? *Yes*

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

Are lashings provided in accordance with rule requirements? *Yes*

Particulars of fiddley, funnel and ventilator coamings:—

Engine Room skylight, steel, efficient -

Funnel Ventilator Coamings are efficient

Hinged steel covers over fire hydrant gratings

Coal Hatch 44x54". Working 3x3x30 angle. w.w. covers 2 1/2" Y4. Bearing 2 1/2", cleats 24" apart.

Particulars of Flush Bunker Scuttles :—

1. Pys. 20' dia on R. Q Beck (castings) fitted with
bayer joints. /

Particulars of Companionways :—

Zone. /

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

1 Vent on file deck. Ch 4 1/2 dia braming 25 x 1/8 to store

1	-	-	-	-	7	"	-	24x30	"	Hold
1	-	-	Bridge	P.	7	"	-	24x30	"	"

Wood plugs & Canvas covers provided

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

File deck in bow 1 high to Fore peak Tank

P.O. OK at Home 2 " " apt " " /

Wood plugs & Canvas Cones provided

Particulars of Gangway Cargo and Coaling Ports :—


Zone. -

Sanitary trench a pipe, gutter in the rain - 4. S. about 48" below R.Q.SK from space above R.Q.SK
1/P " 24 " 284 " " " 284 SK.

Side Scutellum in brown paper on felt and

on 50' Deck 36" high, 2 posts, Handrails about 50" apart, 20" inboard
worse bulwark on Bridge 36" high, 6" inboard

Lifelines have been rigged on each side from forecath to
hatch. Stanchions bolted into legs fastened to hatch coamings
& wire ropes supplied secured by shackles & eyebolts

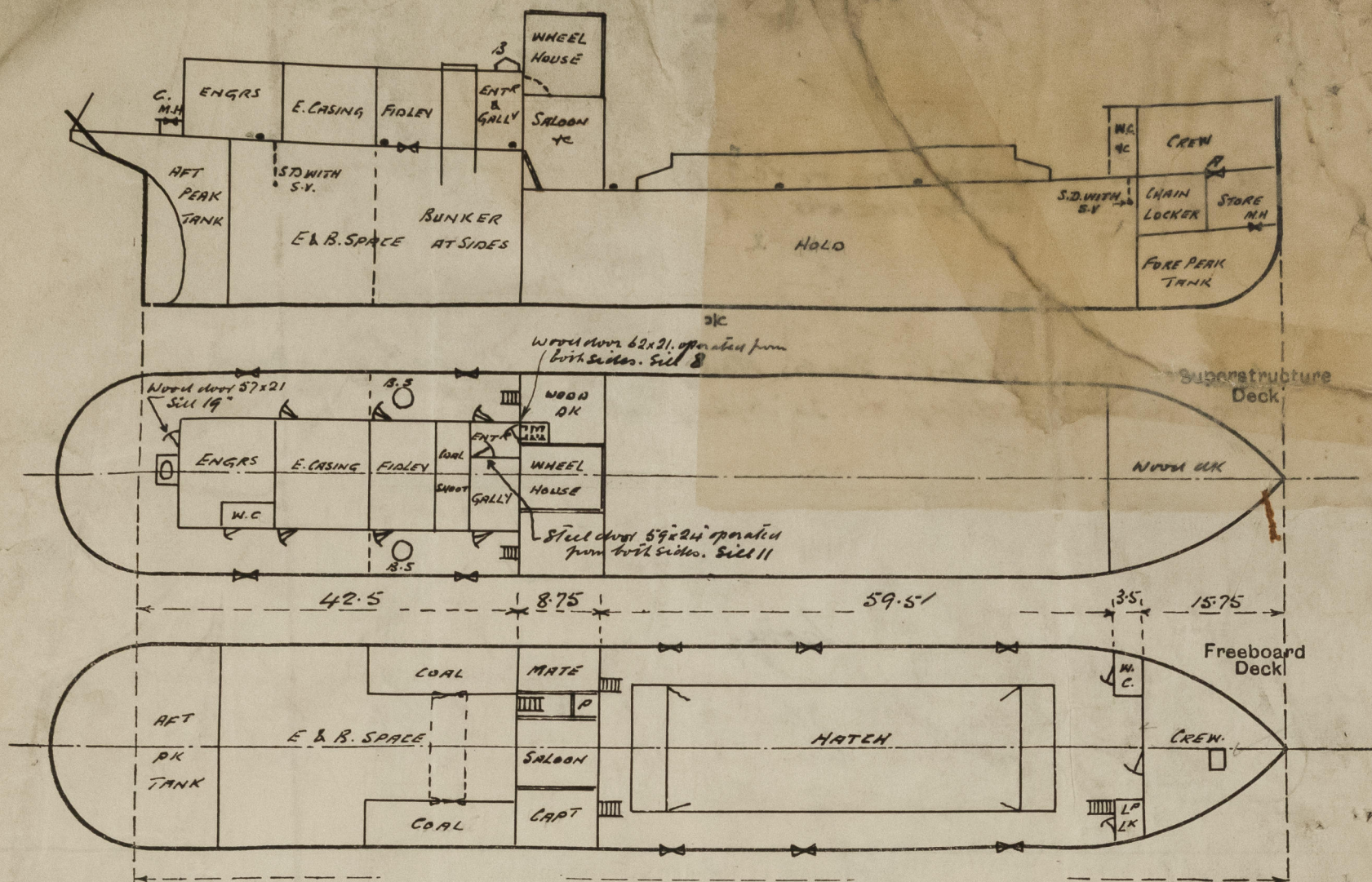
Particulars of Freeing Arrangements.							
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side	
After Well <i>R. 9 x</i> ...	<i>42-6</i> ✓	<i>40</i> ✓	<i>30 x 18</i> 	<i>23</i>	<i>10.75</i> <i>- 7 1/2</i>	<i>10.75 1/2</i>	
Forward Well ...	<i>59-6</i> ✓	<i>42</i> ✓	<i>33 x 19</i> "	<i>3</i>	<i>13</i> ✓	<i>12 1/2 1/2</i>	
<p>State position of each freeing port } After Well :—</p> <p>(F. and A. position and height above deck edge) } Forward Well :—</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such :—</p> <p>Additional area where sheer is less than standard.</p>							
<p><i>Balanced Steel Shutters.</i></p> <p><i>✓ No</i> <i>-</i> <i>-</i> <i>-</i> <i>Port side</i> ✓</p>							

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 ⁽¹⁵⁾	✓							
Raised Quarter Deck Bulkhead ...	<i>N.T. Bulkhead</i>	<i>/</i>				✓	✓	<i>3-0</i>
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	<i>30 /</i>	<i>25 /</i>	<i>4 1/2 x 3 x 36 /</i>	<i>30 /</i>	<i>Knee T x TS.</i>	<i>Stiffener 64 above 205</i>	✓	<i>7-0</i>
Forecastle Bulkhead	<i>Vertical 25 /</i>	<i>/</i>	<i>2 1/2 x 2 1/2 x 30 /</i>	<i>30 /</i>	✓	<i>50 x 20 /</i>	<i>20 /</i>	<i>7-0</i>
Trunk, Aft	✓				<i>250 x 100</i>			
Trunk, Forward	✓				<i>150 x 100</i>			
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	<i>30 /</i>	<i>25 /</i>	<i>3 1/2 x 3 x 30 /</i>	<i>30 /</i>	<i>Knee at Top</i>	<i>49 x 20 /</i>	<i>20 /</i>	<i>7-0</i>
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	...	...		<i>Semtex. no deadlights.</i>
Forecastle Bulkhead	...	...		<i>hinged steel door. operated from both sides ✓</i>
Exposed Machinery Casings on Fore- ward or Raised Quarter Decks	...	...		<i>hinged steel doors. operated from both sides ✓</i>
Exposed Machinery Casings on Super- structure Decks	...	...	✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	...	...	✓
Deckhouses on Flush Deck Ships	...	...	✓

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatch, coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are shown in the following sketches:—



A:- Flush wood hatch on L.H. 5x11 in fore tank 5x5. 2'0" x 18" to shore.

B:- Steel skylight in casing top 3'0" x 2'0" / framing 12x32 I.

C:- Steel hatch on R. Q. x aft. 21x23" to aft peak tank. / framing 12x34 / Riveted steel top plate. Main hatch in top fitted with steel cover + steel bolts.

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

Survey when vessel in dry dock for freeboard assignment only.

Builder's name and yard number. *Cabtree & Co Ltd Gt Yarmouth No 180*

Names of other ships. *Star Point. Cannon*

Wallace Bros Ltd

5 : 2 : 0

Received by me



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