

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Index No. 31247  
(For London Office only.)

15 JUL 1932

GLASGOW REPORT No. 52727

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~

having a raised quarter deck, bridge and forecastle

Port of Survey Glasgow

(Type of Superstructures.)

Date of Survey 13<sup>th</sup> July 1932

Ship's Name

Nationality and Port of Official Number

Gross Tonnage

Date of Build

"BERYL"

British  
Glasgow

147932

568

1924-11

Name of Surveyor J. H. Thomson

Moulded Dimensions: Length

164.66

Breadth

26.5

Depth

12.5

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

951

tons

Coefficient of fineness for use with Tables

718

Particulars of Classification + 100 R.I.

S.S. for No. 29

Depth for Freeboard (D)

Depth correction

Round of Beam correction

Moulded depth ... 12.5

Stringer plate ... 3.6

Sheathing on exposed deck

$T \left( \frac{L-S}{L} \right) =$

Depth for Freeboard (D) = 12.53

(a) Where D is greater than Table depth

(D-Table depth) R =

(12.53 - 10.97) 1.267 = + 1.98

(b) Where D is less than Table depth (if allowed)

(Table depth-D) R =

If restricted by superstructures

Moulded Breadth (B) 26.5

Standard Round of Beam =  $\frac{B \times 12}{50} = 6.36$

Ship's Round of Beam = 6.2

Difference

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.14}{4} (1 - .7734) = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

Pop enclosed ...

" overhang ...

R.Q.D. enclosed ...

" overhang ...

Bridge enclosed ...

" overhang aft ...

" overhang forward ...

F'cle enclosed ...

" overhang ...

Trunk aft ...

forward ...

Tonnage opening aft ...

forward ...

Total ...

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
93.66	93.66	3.75		93.66
10.00	10.00	7.0		10.00
21.00	21.00	7.0		21.00
2.67	2.67			2.67
129.99	127.33			127.33

Standard Height of Superstructure 6.0

" " R.Q.D. 3.43

Deduction for complete superstructure 22.47

Percentage covered  $\frac{S}{L} = 78.95$

" "  $\frac{S_1}{L} = 77.34$

" "  $\frac{E}{L} = 77.34$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 7203

(corrected for absence of forecastle (if required))

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

Deduction = 22.47 + 7203 = - 16.18

SHEER CORRECTION.

act. N. R.Q.D. 3-9 = 3.75  
Std " " 3.43  
3.2 = 3.84

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	26.47	1		26.47	27.0	30.84	1		30.84
1/4 L from A.P.	11.78	4		47.12	12.05	13.72	4		54.88
1/2 L	2.91	2		5.82	3.01	3.39	2		6.78
Amidships		4					4		
3/4 L from F.P.	5.82	2		11.64	6.01	6.01	2		12.02
1/4 L	23.56	4		94.24	24.10	24.10	4		96.40
F.P.	52.94	1		52.94	56.0	56.0	1		56.00
Total				238.23					256.92

Mean actual sheer aft = 2.85

Mean standard sheer aft

Mean actual sheer forward = 2.85

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 1/3

" " aft of " = 50

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{18.69}{18} (.75 - .3947) = -.37$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

+ 8.9" R.Q.D. Ft.

Depth to Freeboard Deck = 16.28

Summer freeboard = 4.04

Moulded draught (d) = 12.24

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 3.06 = 3"

Addition for Winter North Atlantic Freeboard (if required) = 2" + 3" = 5"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 1125$

Tons per inch immersion at summer load water line

T = 8.61

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

= 3.27

3 1/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.718 + .68}{1.86} = \frac{1.398}{1.86}$

Depth Correction ... 1.98

Deduction for superstructures ... 16.18

Sheer correction ... .37

Round of Beam correction ... .01

Correction for Thickness of Deck amidships ... 45.00

Other corrections, scantlings, etc. ...

46.98 16.56 + 30.42

Summer Freeboard = 48.46

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

Tropical Fresh Water Line above Centre of Disc	4 1/4
Fresh Water Line	3 1/4
Tropical Line	1 1/2 LIMITED
Winter Line below	3
Winter North Atlantic Line	5

Tropical Fresh Water Freeboard	4-0 1/2
Fresh Water	3-7 1/4
Tropical	3-9 1/4
Winter	3-11 LIMITED
Winter North Atlantic	4-8 1/2

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		N <sup>o</sup> 1	N <sup>o</sup> 2	FORWARD HATCH	ESCAPE HATCH	HATCH TO STORE AFT.	COAL HATCH OR CASING TOP		
Dimensions of Hatchway		24'-1" x 14'-0"	25'-0" x 14'-0"	3'-7" x 3'-5"	1'-5" x 2'-6"	1'-9" x 2'-3"	5'-5" x 15'-0"		
COAMINGS	Height above Deck	36	30	24	24	24	11		
	Thickness	.44	.44	.36	.36	.36	.32		
	Sides	.44	.44	.36	.36	.36	.32		
	Stiffeners	7 x 3 x .40	7 x 3 x .40	nme	nme	nme	nme		
	Brackets, Stays	nme	nme	nme	nme	nme	nme		
HATCH BEAMS	Number	4	4						
	Spacing	4'-9 3/4"	5'-0"						
	Scantling and Sketch								
		12 x .32	12 x .32	nme	nme	nme	nme		
	Bearing Surface	3"	3"						
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling* and Sketch								
	Bearing Surface								
HATCH COVERS	Material	W.P.	WP	WP	WP	WP	W.P.		
	Thickness	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2		
	How fitted	F + A	F + A	F + A	✓	✓	F + A		
	Bearing Surface	3	3	1 1/2	1 1/2	1 1/2	1 1/2		
Spacing of Cleats		21	21	17	19	17	20		
Number of Tarpaulins		2	2	2	2	2	2		
<p>*Are wood fore and afters steel shod at all bearing surfaces? <i>nme</i></p> <p>Are battens and wedges efficient and in good condition? <i>yes</i></p> <p>Are tarpaulins in good condition and in accordance with rule requirements? <i>yes</i></p> <p>Are lashings provided in accordance with rule requirements? <i>Ringbolts for lashings provided</i></p>									

Particulars of fiddle, funnel and ventilator coamings:—

*Engine skylight on casing top of steel strongly constructed*  
*Fiddle openings protected by strong hinged plate covers*  
*Ventilators on casing top in good condition.*

Particulars of Flush Bunker Scuttles:—

*nme*

Particulars of Companionways:—

*nme.*

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

1 Ventilator on forecastle deck to stove. *coaming 36" high x 6" dia x .32*  
 2 " " " " " *coaming 36 " x 6 " x .32*  
 1 " in forward well to hold " *36 " x 10 " x .34*  
 2 " on raised quarter deck to hold " *36 " x 10 " x .34*

*Ventilator coamings constructed in accordance with the Rules*

*no means of closing provided.*  
*by wood plugs & canvas covers*

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

1 air pipe on forecastle deck to f.p. tank *17" high x 3 1/2" dia*  
 1 " " " R. Q. " a.p. " *6" x 3 1/2"*

*no snifting holes fitted*

*no means of closing air pipes provided*  
*by wood plugs & canvas covers*

Particulars of Gangway Cargo and Coaling Ports:—

*nme.*



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Particulars of Scupper and Sanitary Discharge Pipes:—

There are no scupper pipes discharging below the foremast deck.  
Sanitary discharge pipes are fitted where shown in sketch and have storm valves at ship's side.

Particulars of Side Scuttles:—

There are no side scuttles below the foremast deck.  
Side scuttles in forecabin 9" dia. no deadlights fitted.  
Side scuttles in bridge 9" dia. no deadlights fitted.

Particulars of Guard Rails:—

Guard rails in forecabin deck 3'-0" high with 2 rails. Stanchions 4'-6" apart.

Particulars of Gangways, Lifelines, etc.:—

Suitable provision is made for rigging lifelines in conjunction with a gangway fitted on port side in forward well from ladder to hatch and from hatch to deck as shown in sketch.

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 ...	93.66	3'-4½"	33" x 18" 27" x 18"	3 32	10.5 19	18.73.
Forward Well ...	35.79	4'-1"	33" x 18"	3	12.5	10.79.

State position of each freeing port ... } After Well:— from bridge bulkhead 7'-6", 38'-0", 76'-6"  
(F. and A. position and height above deck edge) } Forward Well:— " " " 11", 11'-0", 25'-6"  
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— fitted with shutters

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

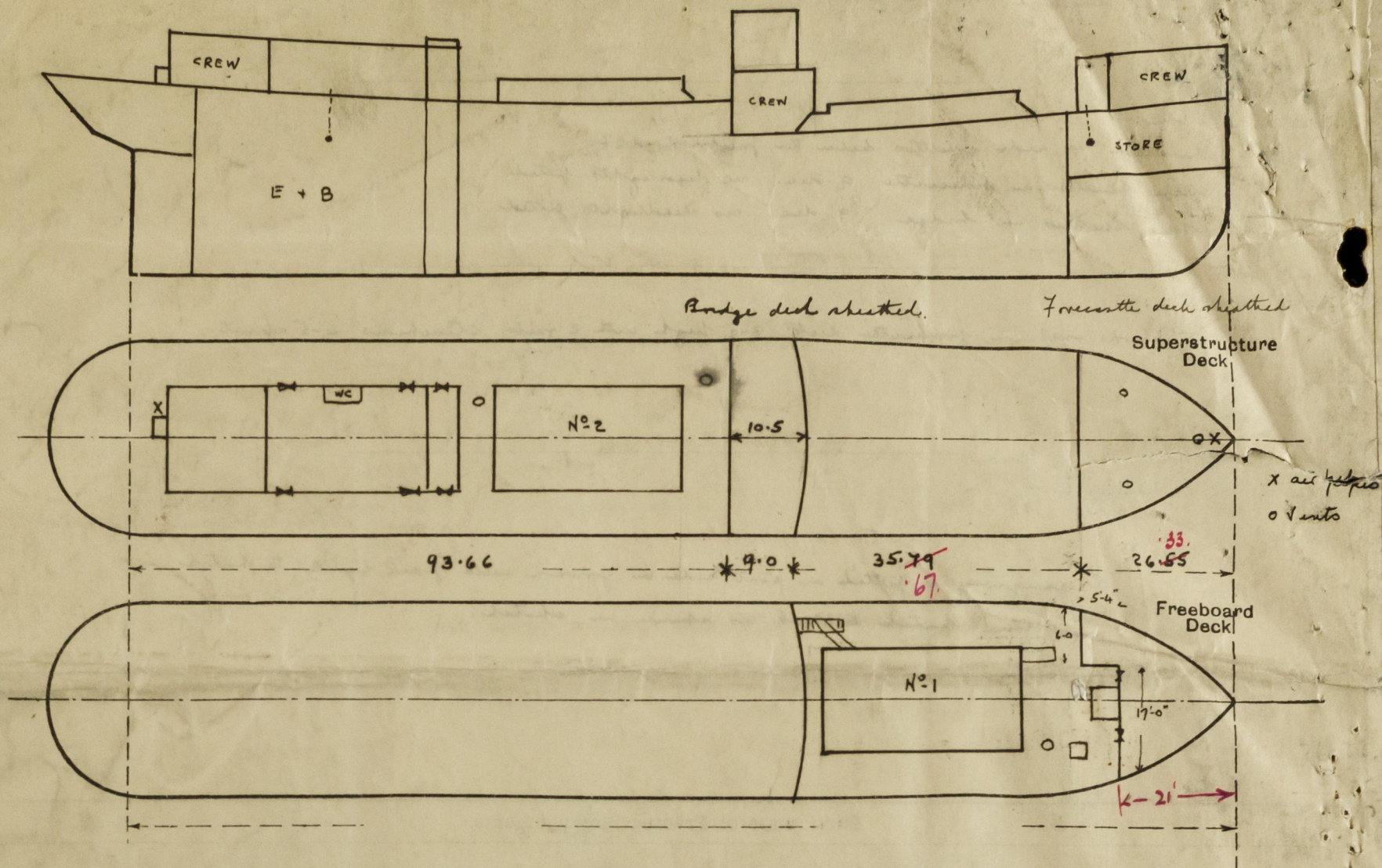
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Peep Bulkhead ...			3 x 2½ x .30	30	brackets top bottom	none	✓	✓
Raised Quarter Deck Bulkhead ...	none	.24	5 x 3 x .30					
Bridge, After Bulkhead ...		.24	5 x 3 x .40 BA	30"	brackets top bottom	none	✓	✓
Bridge, Forward Bulkhead ...	none	.24	2½ x 2½ x .30	36	none	4'-8" x 2'-0"	15"	✓
Forecastle Bulkhead ...	15 x .34	.30						
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	16 x .34	.32	3 x 3 x .30	27	brackets at top	4'-9" x 2'-0" 2'-0" x 2'-0" 4'-10" x 1'-10"	18" 39" 16"	6'-9"
Exposed Machinery Casings on Super- structure Decks ...								
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).

Peep Bulkhead ...	
Raised Quarter Deck Bulkhead ...	No more openings
Bridge, After Bulkhead ...	
Bridge, Forward Bulkhead ...	No more openings
Forecastle Bulkhead ...	Hinged wood doors 1½" thick. manipulated from both sides.
Exposed Machinery Casings on Fore- board or Raised Quarter Decks ...	Hinged steel doors no means of closing
Exposed Machinery Casings on Super- structure Decks ...	Hinged steel doors no means of closing
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ...	Hinged wood doors 1½" thick. no means of closing
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:— This vessel is engaged in the Port of a Continuous Coasting Trade. Timber freeboard not required.

Full displacement at 12'-0" full draft = 1040 tons. Tons per inch = 8.55 tons.  
 " " " 13'-0" " " " 1143 " " " 8.63 "

The survey on this vessel was held afloat and confined to an examination of the means for closing the openings in the sides and decks of the ship.  
 No part of a special survey was held at this time.

Builder's name and yard number *Ailsa S. B. Co Ltd No 390*

Names of sister ships *3/3 "Turquoise" Builders No 391*

Owners *W. Robertson*

✓ Fee £ *6* : *16* : *0*

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