

Rpt. C.11

Index. No. **24727**  
(For London Office only.)

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

29 DEC 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Raised Quarter Deck, Bridge & ForecastlePort of Survey Newcastle-on-TyneDURHAM BROOK

(Type of Superstructures.)

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

STEPNEYBritish1378208081916Glasgow GlasgowDate of Survey 27<sup>th</sup> December 1932Name of Surveyor Alex. E. StevensonMoulded Dimensions: Length 186.3' Breadth 29.25' Depth 14.58'Moulded displacement at moulded draught = 85 per cent. of moulded depth 1423 tonsCoefficient of fineness for use with Tables .737Particulars of Classification +100A1

## Depth for Freeboard (D)

Moulded depth ... .. 14.58'Stringer plate ... .. .03

Sheathing on exposed deck

 $T \left( \frac{L-S}{L} \right) =$  ✓Depth for Freeboard (D) = 14.61

## Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R =  $(14.61 - 14.58) \times 1.432$   
= + 3.14"(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R = ✓If restricted by superstructures ✓

## Round of Beam correction

Moulded Breadth (B)

Standard Round of Beam =  $\frac{B \times 12}{50} = \frac{29.25 \times 12}{50} = 7.02$ Ship's Round of Beam = 7.25"Difference .23 even

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.23}{4} \times .208 = -.01$ 

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...	<u>116.0'</u>	<u>116.00</u>	<u>4.6'</u>		<u>116.00</u>
" overhang ...					
Bridge enclosed ...	<u>9.16'</u>	<u>9.16</u>	<u>7.2 1/2' wood dk.</u>		<u>9.16</u>
" overhang aft ...					
" overhang forward ...	<u>22.13'</u>				
F'le enclosed ...	<u>22.13'</u>	<u>22.13</u>	<u>7.2 1/2' wood dk.</u>		<u>22.13</u>
" overhang at centre ...	<u>1.83'</u>	<u>.26</u>			<u>.26</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>147.82</u>	<u>147.55</u>			<u>147.55</u>

Standard Height of Superstructure 6.00" " R.Q.D. 3.573Deduction for complete superstructure 24.63Percentage covered  $\frac{S}{L} = 79.35\%$ "  $\frac{S_1}{L} = 79.20\%$ "  $\frac{E}{L} = 79.20\%$ 

Percentage from Table, Line A.

(corrected for absence of forecastle (if required)) 74.31%

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction =  $24.63 \times .7431 = -18.30"$ 

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>28.63</u>	1		<u>28.63</u>	<u>48"</u>	<u>48.00</u>	1		<u>48.00</u>
1/3 L from A.P. ...	<u>12.74</u>	4		<u>50.96</u>	<u>18 1/2"</u>	<u>26.67</u>	4		<u>105.20</u>
2/3 L " ...	<u>3.15</u>	2		<u>6.30</u>	<u>4 1/2"</u>	<u>6.42</u>	2		<u>13.00</u>
Amidships ...	<u>✓</u>	4		<u>✓</u>	<u>✓</u>	<u>✓</u>	4		<u>✓</u>
1/3 L from F.P. ...	<u>6.30</u>	2		<u>12.60</u>	<u>6 1/4"</u>	<u>6.71</u>	2		<u>13.42</u>
1/2 L " ...	<u>25.48</u>	4		<u>101.92</u>	<u>25"</u>	<u>26.86</u>	4		<u>107.44</u>
F.P. ...	<u>57.26</u>	1		<u>57.26</u>	<u>62"</u>	<u>62.00</u>	1		<u>62.00</u>
Total ...				<u>257.67</u>					<u>360.18</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{102.51}{18} \left( .75 - \frac{3967}{36018} \right) = -2.01$ If limited on account of midship superstructure. ✓Mean actual sheer aft = Excess

Mean standard sheer aft

Mean actual sheer forward = Excess

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 7.16" " aft of " = .56

## Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 19.11 Ft.Summer freeboard = 4.87Moulded draught (d) = 14.24

Correction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches =  $\frac{14.24}{4} = 3.56 = 3 \frac{1}{2}"$ Addition for Winter North Atlantic Freeboard (if required) = 2"

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 1676$ 

Tons per inch immersion at summer load water line

 $T = 10.915$ Deduction =  $\frac{\Delta}{40 T}$  inches $= \frac{1676}{40 \times 10.915} = 3.84"$  $= 3 \frac{3}{4}"$ 

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.737 + .68}{1.36} = \frac{1.417}{1.36}$ Depth Correction ... .. 3.14Deduction for superstructures ... .. 18.30Sheer correction ... .. 2.01Round of Beam correction ... .. .01Correction for Thickness of Deck amidships ... .. -Other corrections, scantlings, etc. ... .. 54.0057.14 20.32 + 36.82Summer Freeboard = 58.50SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Raised Quarter Wood, Steel, Deck:—Tropical Fresh Water Line above Centre of Disc ... .. 6 1/4"Fresh Water Line " " ... .. 3 3/4"Tropical Line " " ... .. 2 1/2"Winter Line below " " ... .. 3 1/2"Winter North Atlantic Line " " ... .. 5 1/2"Tropical Fresh Water Freeboard ... .. 4' - 10 1/2"Fresh Water " " ... .. 4' - 4 1/4"Tropical " " ... .. 4' - 6 3/4"Winter " " ... .. 4' - 8"Winter North Atlantic " " ... .. 5' - 2"

30 DEC 1932

5m, 3, 32.

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Lloyd's Register  
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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N <sup>o</sup> 1 on Freebd. d/c	N <sup>o</sup> 2 on R.O.D.	Bunker H. on Casing Top	off peak H. on R.O.D.					
Dimensions of Hatchway	27'-6" x 17'-9" d/c	36'-8" x 17'-9" d/c	11'-3" x 21'-0"	2'-0" x 1'-9"					
COAMINGS	Height above Deck ... 30"	36"	10"	12"					
	Thickness Sides ... 44"	44"	36"	35"					
	Thickness Ends ... 44"	44"	36"	35"					
	Stiffeners ... 7 1/2 x 3 BA	7 1/2 x 3 BA	—	—					
	Brackets, Stays ... 2 x 10 x 24 plates	3 x 11 1/2 x 34 plates	—	—					
HATCH BEAMS	Number ... 5	7	none	—					
	Spacing ... 4'-7"	4'-7"	—	—					
	Scantling and Sketch ... 15/8" x 35/8"	15/8" x 35/8"	—	—					
	angles ... 4 x 3 x 42	4 x 3 x 42	—	—					
	Bearing Surface ... 3"	3"	—	—					
FORE AND AFTERS	Number ... none	none	3	—					
	Spacing ... none	—	5'-3"	—					
	Unsupported Lengths ...	—	centre plate 20' x 26' riveted to 3" stiffeners	—					
	Scantling and Sketch ...	—	sides 6" x 3 BA bolted to 3" stiffeners	—					
	Bearing Surface ...	—	—	—					
HATCH COVERS	Material ... w.p.	w.p.	w.p.	—50 steel riveted top, with manhole 17" x 12" having bolted steel lid.					
	Thickness ... 5"	5"	5"	—					
	How fitted ... pta	pta	pta	—					
	Bearing Surface ... 3' x 4'	3' x 4'	3' x 4'	—					
Spacing of Cleats	24"	24"	—	—					
Number of Tarpaulins	2	2	—	—					

\*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?

yes.  
 yes.  
 yes.  
 yes.

For tarpaulins & efficient battening arrangements provided

Particulars of fiddle, funnel and ventilator coamings:—

Side fiddle gratings have hinged steel covers.  
 Centre fiddle grating has ~~no~~ cover permanently attached.  
 Funnel & fiddle ventilators in efficient condition.  
 Engine skylight of wood, strongly constructed.

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways:—

access to peak space & chain locker in Forecastle bld. with hinged steel door 4'-2" x 2'-6", sill 20" door secured by padlock on outside only.

For companion to Bridge space, see openings in Bridge after bulkhead.

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

on Freebd. d/c in fore well 1 off 12" dia. coam 36" x 34" to hold.  
 on R.O.D. 1 " 12" " 36" x 34" " "  
 constructed in accordance with rules.

Efficient closing appliances are provided

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

1, 1 3/4" pipe thru fide bld. 4 1/2" above fide d/c. from fore peak  
 1, 1" " " " 4 1/2" " " " double bottom  
 1, 2 1/2" " " " 5" " " " " "  
 1 vent air pipe 1 1/2" dia x 21" above R.O.D. from aft peak

Efficient closing appliances are provided

Particulars of Scuppers and Sanitary Discharge Pipes:—

From fide side House P. side. 2 w/c discharging through fide side / no storm valves.  
 From Bridge space S. side. 1 w/c discharging through Bridge side / no storm valve.  
 " " " 1 bath discharging through Bridge side with on/off cock.

Particulars of Side Scuttles:—

In Forecastle with hinged deadlights.

Particulars of Guard Rails:—

Steel bulwarks in fore well 3'-9" high, on R.O.D. 3'-0" high forward 2'-9" aft. Van Bridge 3'-0" high, efficiently constructed & supported.  
 Guard rails on fide. 3'-0" high, having 2 rods & stanchions 4'-0" apart.

Particulars of Gangways, Lifelines, etc.:—

none (area forward)

Suitable provision is made for rigging lifelines many part of the ship which might have to be used by the crew in the regular working of the vessel

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 R.O.D.	116'-0"	3'-0" fore end 2'-9" aft end	2'-0" x 1'-10" 2'-9" x 1'-6"	2 4	7-33-1/2 23-8-3	23-20-1/2
Forward Well	36'-6"	3'-9"	2'-8" x 2'-0"	2	10-66-1/2	10-10-1/2

State position of each freeing port ... After Well: R.O.D. 32'-9" x 67'-9" from Bridge aft bld. 3" above deck / (P. and A. position and height above deck edge) Forward Well: 9'-0" x 24'-0" from Bridge fore bld. 8" above deck.  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Hinged steel shutters, one horizontal bar.

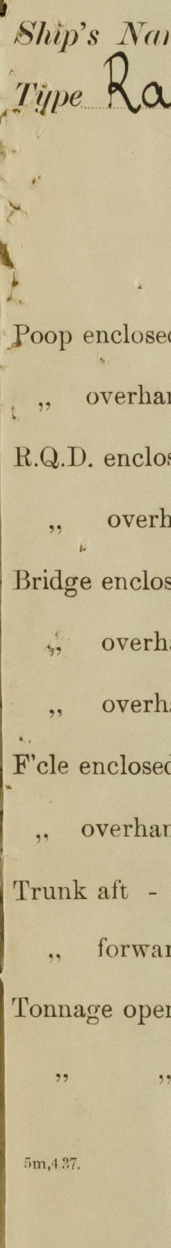
Additional area where sheer is less than standard.

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	30"	26"	not accessible.		To Saloon	4'-2" x 1'-9"	14"	4'-6"
Bridge, After Bulkhead					To Saloon	4'-10" x 1'-9"	17"	7'-0"
Bridge, Forward Bulkhead	34"	26"	not accessible.					7'-0"
Forecastle Bulkhead	—	25"	4 fore & aft bulkheads.		L fide	4'-6" x 1'-9" (2)	20"	7'-0"
					L S.H.	4'-8" x 1'-8" (3)	19"	
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	34"	26"	3 x 2 1/2" x 32"	30"	Birth at h/p	3'-9" x 1'-9" (4)	31"	6'-6"
Exposed Machinery Casings on Superstructure 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	To Saloon. Solid Hinged wood door (1 1/2" thick) secured both sides.
Bridge, After Bulkhead	To both S. side. Hinged Steel door. no efficient closing appliance
Bridge, Forward Bulkhead	—
Forecastle Bulkhead	To fide. Hinged steel doors. secured both sides. also see companion to peak space
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	To S.H. Hinged steel doors. secured by padlock on outside only. (aft S.H. door side is 4" above sill.)
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors. L Engine Room. Secured both sides. L Boiler Room. no efficient closing appliance.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	

A hand-drawn sketch of a ship's hull cross-section. The drawing shows the internal structure of the hull, including various compartments and a bunker hatch. The text "Bunker Hatch" is written above the hatch, with an arrow pointing to it. The sketch is drawn on a piece of paper with a grid pattern.



~~Timber assignment not required.~~  
~~Vessel surveyed afloat for freeboard only.~~

Received by me