

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having POOP BRIDGE & TOWER

Port of Survey Newcastle

(Type of Superstructures.)

Date of Survey 28<sup>th</sup> Oct. 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

KINGSBURY

British  
Cardiff

119950

4072

1904-7

Name of Surveyor P. Horndale

Moulded Dimensions: Length 355.00 Breadth 48.54 Depth 28.41  
Moulded displacement at moulded draught = 85 per cent. of moulded depth (24.22) 9750 tons  
Coefficient of fineness for use with Tables 818

Particulars of Classification +100 A1  
S.S. Sh. 2nd No 3-10.30

### Depth for Freeboard (D)

Moulded depth ... 28.46  
Stringer plate ... .04  
Sheathing on exposed deck  
 $T \left( \frac{L-S}{L} \right) =$   
Depth for Freeboard (D) = 28.50

### Depth correction

(a) Where D is greater than Table depth  
(D-Table depth) R =  
 $(28.50 - 23.67) 2.731 = + 13.19$   
(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) 48.54  
Standard Round of Beam =  $\frac{B \times 12}{50} = \frac{11.65}{50}$   
Ship's Round of Beam = 12  
Difference .35  
Restricted to  
Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.35}{4} \times \left( 1 - \frac{.493}{1} \right) = .04$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<u>30.16</u>	<u>30.16</u>	<u>7'-0"</u>	<u>✓</u>	<u>30.16</u>
" overhang ...	<u>✓</u>		<u>+ .21' (mm)</u>		
R.Q.D. enclosed ...	<u>✓</u>				
" overhang ...	<u>✓</u>				
Bridge enclosed ...	<u>107.58</u>	<u>107.58</u>	<u>7'-0"</u>	<u>✓</u>	<u>106.81</u>
" overhang aft ...	<u>108.25</u>				
" overhang forward ...	<u>37.26</u>	<u>37.26</u>	<u>7'-0"</u>	<u>✓</u>	<u>37.26</u>
" overhang ...	<u>✓</u>		<u>+ .21' (mm)</u>		
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<u>175.00</u>	<u>175.00</u>			<u>174.23</u>

Standard Height of Superstructure 7.05  
R.Q.D. ✓  
Deduction for complete superstructure 39  
Percentage covered  $\frac{S}{L} = \frac{49.30}{100}$   
"  $\frac{S_1}{L} = \frac{49.30}{100}$   
"  $\frac{E}{L} = \frac{49.07}{100}$   
Percentage from Table, Line A. ✓  
(corrected for absence of forecastle (if required))  
Percentage from Table, Line B. 35.21  
(corrected for absence of forecastle (if required))  
Interpolation for bridge less than 2L (if required)  
Deduction =  $39 \times .3521 = -13.73$

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>45.50</u>	<u>1</u>		<u>45.50</u>	<u>54</u>	<u>54.00</u>	<u>1</u>		<u>54.00</u>
$\frac{1}{2}$ L from A.P. ...	<u>20.25</u>	<u>4</u>		<u>81.00</u>	<u>21.2</u>	<u>23.31</u>	<u>4</u>		<u>93.24</u>
$\frac{2}{3}$ L " ...	<u>5.00</u>	<u>2</u>		<u>10.00</u>	<u>5</u>	<u>5.83</u>	<u>2</u>		<u>11.66</u>
Amidships ...	<u>✓</u>	<u>4</u>		<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>4</u>		<u>✓</u>
$\frac{2}{3}$ L from F.P. ...	<u>10.01</u>	<u>2</u>		<u>20.02</u>	<u>11.2</u>	<u>11.70</u>	<u>2</u>		<u>23.40</u>
$\frac{1}{2}$ L " ...	<u>40.50</u>	<u>4</u>		<u>162.00</u>	<u>45</u>	<u>46.81</u>	<u>4</u>		<u>187.24</u>
F.P. ...	<u>91.00</u>	<u>1</u>		<u>91.00</u>	<u>108</u>	<u>108.00</u>	<u>1</u>		<u>108.00</u>
Total ...				<u>409.52</u>					<u>444.54</u>

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 = 158  
" " aft of " = 145

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{68.02}{18} \left( \frac{75-24.65}{1} \right) = -1.91$   
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 = 28.50  
Summer freeboard = 5.10  
Moulded draught (d) = 23.40

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches =  $\frac{23.40}{4} = 5.85 = 5\frac{3}{4}$   
Addition for Winter North Atlantic Freeboard (if required) = ✓

### Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta = 9427$   
Tons per inch immersion at summer load water line  
T = 36.55  
Deduction =  $\frac{\Delta}{40T}$  inches  
=  $\frac{9427}{40 \times 36.55} = 6.45$   
=  $6\frac{1}{2}$

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

Correction for coefficient  $\frac{.818 + .680}{1.36} = \frac{1.498}{1.36}$   
Depth Correction ... 13.19  
Deduction for superstructures ... 13.73  
Sheer correction ... 1.91  
Round of Beam correction ... .04  
Correction for Thickness of Deck amidships ...  
Other corrections, scantlings, etc. ...

Summer Freeboard = 61.34

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

Tropical Fresh Water Line above Centre of Disc ...	<u>12 1/4</u>	Tropical Fresh Water Freeboard ...	<u>4-1</u>
Fresh Water Line " " ...	<u>6 1/2</u>	Fresh Water " " ...	<u>4-6 3/4</u>
Tropical Line " " ...	<u>5 3/4</u>	Tropical " " ...	<u>4-7 1/2</u>
Winter Line below " " ...	<u>5 3/4</u>	Winter " " ...	<u>5-7</u>
Winter North Atlantic Line " " ...	<u>✓</u>	Winter North Atlantic " " ...	<u>✓</u>

4 NOV 1932

W500-220(1/2)



Lloyd's Register  
MARKING FORM  
RECEIVED  
23 FEB 1933



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Upper Deck											
Description of Hatchway	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10	No. 11
Dimensions of Hatchway	29'2"x16'0"	29'2"x16'0"	20'10"x16'0"	29'2"x16'0"	25'0"x16'0"	8'4"x14'0"	8'4"x14'0"	8'4"x14'0"	8'4"x14'0"	8'4"x14'0"	8'4"x14'0"
COAMINGS	Height above Deck	39"	39"	13"	39"	39"	39"	39"	39"	39"	39"
	Thickness	50"	50"	35"	50"	50"	50"	50"	50"	50"	50"
	Sides	50"	50"	35"	50"	50"	50"	50"	50"	50"	50"
	Stiffeners	50"	50"	35"	50"	50"	50"	50"	50"	50"	50"
HATCH BEAMS	Number	2	2	1	2	2	2	2	2	2	2
	Spacing	9'8 1/2"	9'8 1/2"	1 beam	9'8 1/2"	8'4"	8'4"	8'4"	8'4"	8'4"	8'4"
	Scantling and Sketch	5 1/2"x40"	5 1/2"x40"	6"x50"	5 1/2"x40"	5 1/2"x40"	5 1/2"x40"	5 1/2"x40"	5 1/2"x40"	5 1/2"x40"	5 1/2"x40"
	Bearing Surface	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"	3"x3"x40"
FORE AND AFTERS	Number	3	3	3	3	3	3	3	3	3	3
	Spacing	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"
	Unsupported Lengths	9'8 1/2"	9'8 1/2"	6'0" to 8'0"	9'8 1/2"	8'4"	8'4"	8'4"	8'4"	8'4"	8'4"
	Scantling and Sketch	5 1/2"x7"	5 1/2"x7"	5 1/2"x5"	5 1/2"x7"	5 1/2"x7"	5 1/2"x7"	5 1/2"x7"	5 1/2"x7"	5 1/2"x7"	5 1/2"x7"
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.
	Thickness	3"	3"	2 1/2"	3"	3"	3"	3"	3"	3"	3"
	How fitted	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
	Bearing Surface	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"
Number of Tarpaulins	3	3	3	3	3	3	3	3	3	3	3

Particulars of fiddle, funnel and ventilator coamings:-  
 Fiddle gratings are fitted with hinged steel covers.  
 E.R. skylight is steel.  
 Fiddle & funnel vents good.

Particulars of Flush Bunker Scuttles:-  
 None.

Particulars of Companionways:-  
 Bridge deck:- steel companion with hinged steel door operating both sides.  
 Steel 10 1/2"

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:-  
 Fiddle deck:- 2 @ 12" dia. to hood. Coamings 27"x32"  
 Wells:- 5 @ 15" " " " 36"x36"  
 Bridge:- 1 @ 12" " " " 45"x26" (Protected)  
 2 @ 11" " " " 26"x26"  
 2 @ 6" " " " 13"x26"  
 2 @ 6" " " " 30"x26"

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:-  
 all air pipes are flush with decks & fitted with Brass Screw Caps.

Particulars of Gangway Cargo and Coaling Ports:-  
 None.

## Particulars of Scuppers and Sanitary Discharge Pipes:-

2 W.C. discharges forward above feed deck. No S.V. fitted.  
 2 " " aft to 1 midships " " S.V. fitted.

## Particulars of Side Scuttles:-

Hinged dead. lights fitted in the Poop. Bridge & Fore spaces but several are missing.

## Particulars of Guard Rails:-

Poop & fore: 3 tier rails 3'3" high. Stanchions 4'0" apart.  
 Wells - bulwarks 4'3" high. Stanchions 8'35" B.P. 1 1/2 dia round iron alternately 8'6"3"  
 Bridge - " 3'3"

## Particulars of Gangways, Lifelines, etc.:-

None fitted. Crew forward. Officers aft.  
 Provision is made for rigging lifelines  
 port to starboard across the well deck.

REPAIR

## 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	95'10"	4'3"	2'25" x 1'83" 3'0" x 6"	4.6	16.47 sq ft 19.4	19.2 sq ft
Forward Well	79'2"	4'3"	2'25" x 1'83"	4	16.47 sq ft	15.8 sq ft

State position of each freeing port ... After Well:- 16'0" - 39'0" - 60'0" - 80'0" from bridge end.  
 (F. and A. position and height above deck edge) Forward Well:- 13'0" - 32'0" - 49'0" - 67'0" " fore side house } 14" above deck

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	-	32	Bulkhead lined up			15'4"x27"	36"	
Raised Quarter Deck Bulkhead	✓							
Bridge, After Bulkhead	-	36	5 1/2"x3 1/2"x44"	32	None	2'4'6"x48"	24"	
Bridge, Forward Bulkhead	7'3"x40"	35	7 1/2"x3 1/2"x60 BA	30	Bkts.	None		
Forecastle Bulkhead	-	26	3'3"x30"	24"-51"	None	1'4'3"x36"	18"	
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	36	30	3'3"x35"	30	None	2'4'3"x24"	19"	7'0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	38	32	6 1/2"x4'55"	50	Restricted to beams at top	2'4'3"x24"	19"	
Deckhouses on Flush Deck Ships	✓							

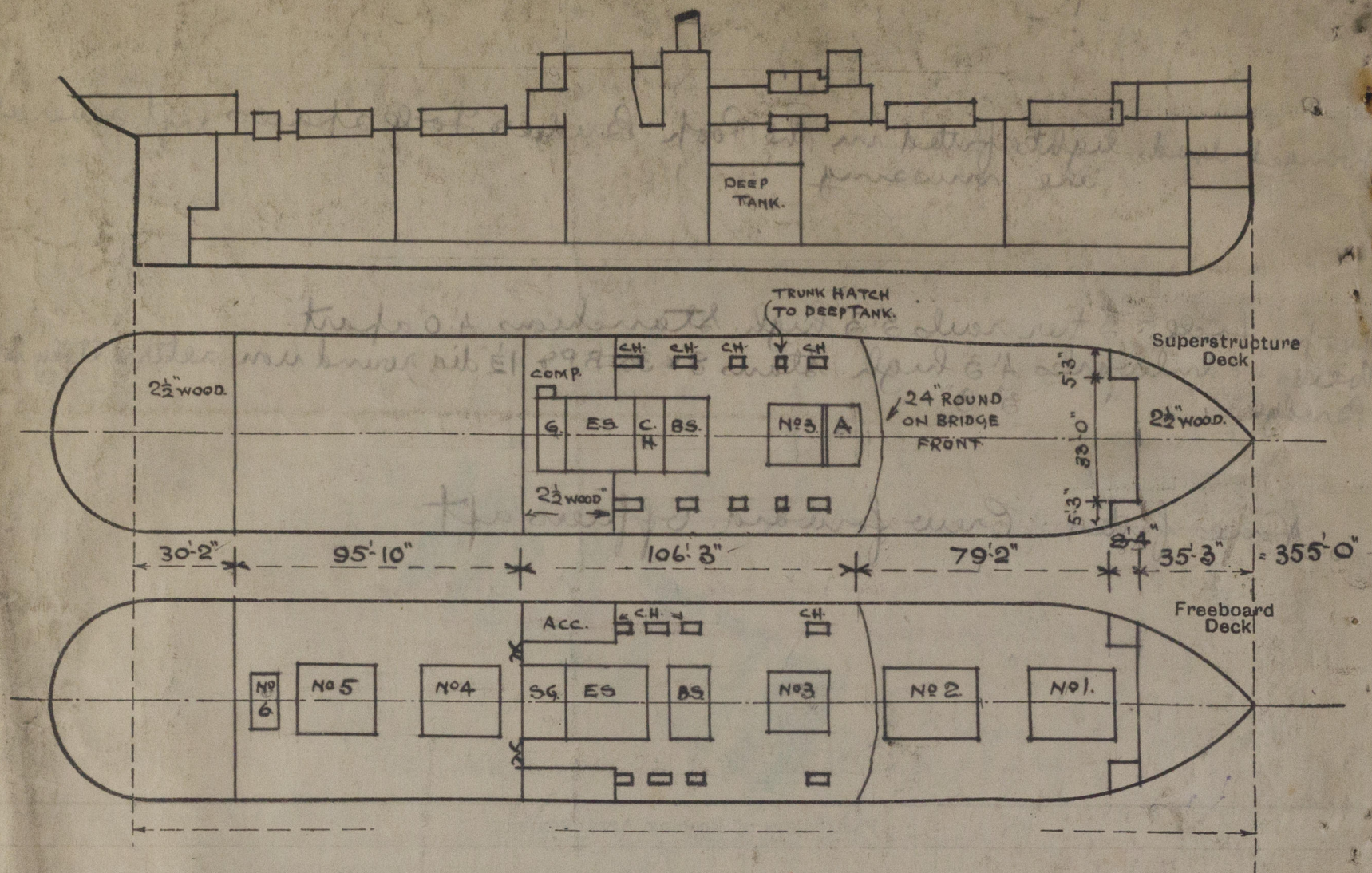
## Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	Hinged teak door - opening both sides.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	2 hinged steel doors - operating both sides.
Bridge, Forward Bulkhead	Intact
Forecastle Bulkhead	5 hinged steel doors - operating both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	2 hinged steel doors - operating both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2 hinged steel doors - operating both sides.
Deckhouses on Flush Deck Ships	✓

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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:—



*Equiv. Bridge Front.*  
 $106.25 + \frac{2}{3} \times 2'$   
 $106.25 + 1.33'$   
 $= 107.58'$

*Equiv. fore Mast.*  
 $43.58 - \frac{33 \times 5.33}{43.5}$   
 $- 6.82$   
 $= 37.26'$

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

*Vessel examined afloat.*

<i>Ex Draft.</i>	<i>Ex Disp.</i>	<i>T.P.I.</i>
22'-0"	8745	36.4
23'-0"	9180	36.5
24'-0"	9620	36.6

$8\% \times 2419 = 242 \frac{1}{2}$

$94 \times \frac{1}{2} = 9750$

$\frac{1}{4} = \frac{9}{9741}$

$23 - 9.180$

$6\% \times 36.55 = 2.193$

$9427 \text{ tons}$

Builder's name and yard number

*J. Readhead & Sons, Ltd.*

Names of sister ships

Owners

*Alexander Shipping Co. Ltd. (Copper Alexander & Co.)*

Fee

*12 : 15 : 0*

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