

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having *C.P.S. with tonnage opening*

Port of Survey *Glasgow*

Date of Survey *-*

Name of Surveyor *T.R. McIlwenna*

Particulars of Classification *Contingent +100 A1 with  
Hull and superstructure built of steel  
Complete superstructure vessel with  
tonnage opening.*

Ship's Name *Harland Woodys. Yard  
No 999.*

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

Moulded Dimensions: Length *470'* Breadth *66'* Depth *44' 33"*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *17005* tons

Coefficient of fineness for use with Tables *416 .684*

Depth for Freeboard (D) *33.90*

Depth correction

(a) Where D is greater than Table depth  
(D - Table depth) R = *(33.04 - 31.33) 3' = + 5.13'*

(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R = *1.71'*

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) *66'*

Standard Round of Beam =  $\frac{B \times 12}{50} = 15.84$

Ship's Round of Beam = *12"*

Difference *3.84*

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{3.84}{4} \times 0.06 = +.01$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>23.94</i>	<i>23.79</i>	<i>8'</i>		<i>23.79</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
<i>fore</i> + Bridge enclosed ...	<i>440.72</i>	<i>440.63</i>	<i>8'</i>		<i>440.63</i>
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	<i>5.7</i>	<i>2.79</i>	<i>8'</i>		<i>2.79</i>
" forward ...					
Total ...	<i>470.00</i>	<i>467.21</i>			<i>467.21</i>

Standard Height of Superstructure	<i>7.5'</i>
" " R.Q.D.	
Deduction for complete superstructure	<i>42"</i>
Percentage covered $\frac{S}{L} = 100$	
" " $\frac{S_1}{L} = 99.40$	
" " $\frac{E}{L} = 99.40$	
Percentage from Table, Line A.	<i>99.26</i>
(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 = $42 \times \frac{99.26}{99.40} = 41.75$	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>57.00</i>	<i>1</i>		<i>57.00</i>	<i>66.00</i>	<i>66.00</i>	<i>1</i>		<i>66.00</i>
$\frac{1}{4}L$ from A.P. ...	<i>25.365</i>	<i>4</i>		<i>101.46</i>	<i>26.75</i>	<i>29.37</i>	<i>4</i>		<i>117.48</i>
$\frac{2}{4}L$ " ...	<i>6.27</i>	<i>2</i>		<i>12.54</i>	<i>6.5</i>	<i>7.26</i>	<i>2</i>		<i>14.52</i>
Amidships ...		<i>4</i>					<i>4</i>		
$\frac{3}{4}L$ from F.P. ...	<i>12.54</i>	<i>2</i>		<i>25.08</i>	<i>13.5</i>	<i>13.86</i>	<i>2</i>		<i>27.72</i>
$\frac{1}{4}L$ " ...	<i>50.73</i>	<i>4</i>		<i>202.92</i>	<i>53.5</i>	<i>56.07</i>	<i>4</i>		<i>224.28</i>
F.P. ...	<i>114.00</i>	<i>1</i>		<i>114.00</i>	<i>120.6</i>	<i>126.00</i>	<i>1</i>		<i>126.00</i>
Total ...				<i>513.00</i>					<i>576.00</i>

Mean actual sheer aft	<i>66.00</i>
Mean standard sheer aft	<i>66.00</i>
Mean actual sheer forward	<i>29.37</i>
Mean standard sheer forward	<i>29.37</i>
Length of enclosed superstructure forward of amidships =	<i>66.00</i>
" " aft of " =	<i>66.00</i>

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left( \frac{75 - S}{2L} \right) = \frac{63}{18} \times .25 = -.87$$

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 =	<i>33.04</i>
Summer freeboard =	<i>4.69</i>
Moulded draught (d) =	<i>28.35</i>

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = *7.09* = *7"*

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line	<i>17440</i>
Tons per inch immersion at summer load water line	<i>59.20</i>
Deduction = $\frac{\Delta}{40T}$ inches	<i>7.36</i>
	<i>7 1/4</i>

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{684.46 + 68}{1.36} = \frac{1.36}{1.36} = 1.364$ 

	+	-
Depth Correction ...	<i>5.13</i>	
Deduction for superstructures ...		<i>41.75</i>
Sheer correction ...		<i>.87</i>
Round of Beam correction ...	<i>.01</i>	
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...		
Summer Freeboard =	<i>56.16</i>	

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

Tropical Fresh Water Line above Centre of Disc ...	<i>14 1/4"</i>
Fresh Water Line " " ...	<i>7 1/4"</i>
Tropical Line " " ...	<i>7"</i>
Winter Line below " " ...	<i>7"</i>
Winter North Atlantic Line " " ...	<i>7"</i>

Tropical Fresh Water Freeboard ...	<i>3' - 6"</i>
Fresh Water " " ...	<i>4' - 1"</i>
Tropical " " ...	<i>4' - 1 1/4"</i>
Winter " " ...	<i>5' - 3 1/4"</i>
Winter North Atlantic " " ...	<i>5' - 3 1/4"</i>



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	Sides	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...

\*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?

Particulars of fiddle, funnel and ventilator coamings:—

20 Rule requirements

Particulars of Flush Bunker Scuttles:—

✓

Particulars of Companionways:—

✓

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

20 Rule requirements

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

20 Rule requirements

Particulars of Gangway Cargo and Coaling Ports:—

✓

Particulars of Scuppers and Sanitary Discharge Pipes:—

20 Rule requirements

Particulars of Side Scuttles:—

20 Rule requirements

Particulars of Guard Rails:—

20 Rule requirements

Particulars of Gangways, Lifelines, etc.:—

20 Rule requirements

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	5'-7"		20 Rule requirements			
Forward Well	✓					

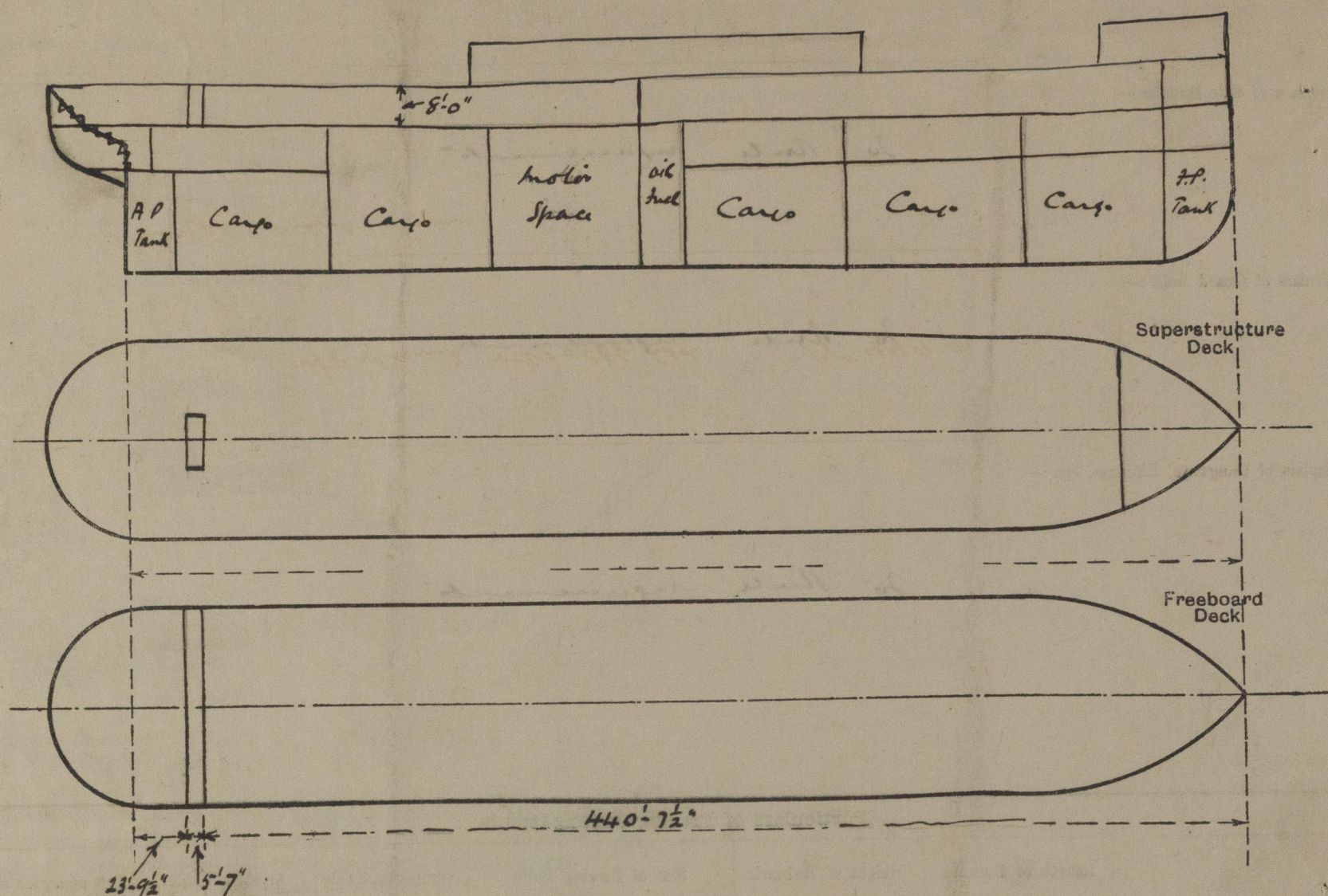
State position of each freeing port ... { After Well:—  
 (F. and A. position and height above deck edge) { Forward Well:—  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—  
 Additional area where sheer is less than standard.

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	...	...	...	...	...	...	...	...
Bridge, After Bulkhead	...	...	...	...	...	...	...	...
Bridge, Forward Bulkhead	...	...	...	...	...	...	...	...
Forecastle Bulkhead	...	...	...	...	...	...	...	...
Trunk, Aft	...	...	...	...	...	...	...	...
Trunk, Forward	...	...	...	...	...	...	...	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	...	...	...	...	...	...	...
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	...
Bridge, After Bulkhead	...
Bridge, Forward Bulkhead	...
Forecastle Bulkhead	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...
Exposed Machinery Casings on Superstructure Decks	...
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...
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:—

Full Displacement at 28' draft = 17070 Tons  
 " " " 29' " = 17780 "  
 Tons per Inch at 28' " = 58.96 "  
 " " " 29' " = 59.42 "

Builder's name and yard number Harland & Wolff Ltd N° 999.9.

Names of sister ships ✓

Owners Royal Mail Lines

Fee £ : : Received by me



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Foundation