

# Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having complete superstructure

Port of Survey \_\_\_\_\_

(Type of Superstructures.)

Date of Survey 28/1/37

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>Stephen &amp; Sons No. 557</u>				

Name of Surveyor \_\_\_\_\_

Moulded Dimensions: Length 530.33 Breadth 73.00 Depth 37.00 to E deck  
 Moulded displacement at moulded draught = 85 per cent. of moulded depth \_\_\_\_\_ tons  
 Coefficient of fineness for use with Tables 70 (assumed)

Particulars of Classification 100 A1 with freeboard corresponding to a summer draft of 29'-11 1/2"

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>37.00</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(37.04 - 35.35) / 3 = + 5.07</u>	Moulded Breadth (B) <u>73.00</u>
Plate ... .. <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>1.69</u>	Standard Round of Beam = $\frac{B \times 12}{50} = 17.52$
Heating on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>4</u>
Depth for Freeboard (D) = <u>37.04</u>		Difference = <u>13.52</u>
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{13.52}{4} \times 1 = + 3.38$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>i</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..					
"  overhang ... ..					
R.Q.D. enclosed ... ..					
"  overhang ... ..					
Bridge enclosed ... ..					
"  overhang aft ... ..					
"  overhang forward ... ..					
Forecastle enclosed ... ..					
"  overhang ... ..					
Trunk aft ... ..					
"  forward ... ..					
Tonnage opening aft ... ..					
"  "  forward ... ..					
Total ... ..					

Standard Height of Superstructure 7.5  
 " " R.Q.D. \_\_\_\_\_  
 Deduction for complete superstructure 42  
 Percentage covered  $\frac{S}{L} =$  \_\_\_\_\_  
 " "  $\frac{S_i}{L} =$  \_\_\_\_\_  
 " "  $\frac{E}{L} =$  \_\_\_\_\_  
 Percentage from Table, Line A. (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

### SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ... ..	<u>63.03</u>	1	<u>63.03</u>	<u>56.00</u>	<u>74.00</u>	1	<u>74.00</u>
1/2 L from A.P. ... ..	<u>28.05</u>	4	<u>112.20</u>	<u>28.00</u>	<u>32.93</u>	4	<u>131.72</u>
2/3 L " ... ..	<u>6.93</u>	2	<u>13.86</u>	<u>8.00</u>	<u>8.14</u>	2	<u>16.28</u>
Amidships ... ..		4				4	
2/3 L from F.P. ... ..	<u>13.87</u>	2	<u>27.74</u>	<u>15.00</u>	<u>14.08</u>	2	<u>28.16</u>
" ... ..	<u>56.10</u>	4	<u>224.40</u>	<u>48.00</u>	<u>56.96</u>	4	<u>227.84</u>
F.P. ... ..	<u>126.07</u>	1	<u>126.07</u>	<u>110.00</u>	<u>128.00</u>	1	<u>128.00</u>
Total ... ..			<u>567.30</u>				<u>606.00</u>

Mean actual sheer aft = Excess  
 Mean standard sheer aft = Excess  
 Mean actual sheer forward = Excess  
 Mean standard sheer forward = Excess  
 Length of enclosed superstructure forward of amidships = \_\_\_\_\_  
 " " aft of " = \_\_\_\_\_

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{38.70}{18} \left( .25 \right) = -1.54$   
 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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
		Correction for coefficient $\frac{70 + 66}{136} = \frac{136}{136}$	
Depth to Freeboard Deck = <u>37.04</u>	Displacement in salt water at summer load water line	Depth Correction ... ..	<u>5.07</u>
Summer freeboard = <u>6.54</u>	$\Delta =$	Deduction for superstructures ... ..	<u>42.00</u>
Moulded draught (d) = <u>30.50</u>	Tons per inch immersion at summer load water line	Sheer correction ... ..	<u>1.54</u>
Deduction for Tropical freeboard and addition for winter freeboard = $\frac{d}{4}$ inches = _____	T = _____	Round of Beam correction ... ..	<u>3.38</u>
Addition for Winter North Atlantic Freeboard (if required) = _____	Deduction = $\frac{\Delta}{40T}$ inches = _____	Correction for Thickness of Deck amidships ... ..	
		Other corrections, scantlings, etc. ... ..	<u>.54</u>
		Summer Freeboard = <u>27.27</u>	

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

Tropical Fresh Water Line above Centre of Disc ... ..	Tropical Fresh Water Freeboard ... ..
Fresh Water Line " " ... ..	Fresh Water " " ... ..
Tropical Line " " ... ..	Tropical " " ... ..
Winter Line below " " ... ..	Winter " " ... ..
Winter North Atlantic Line " " ... ..	Winter North Atlantic " " ... ..



Actual draught = 29'-11 1/2" ... ..  
Moulded draft = "E" Deck ... ..