

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey
having <i>complete superstructure</i>					Date of Survey <i>28/1/37</i>
(Type of Superstructures.)					Name of Surveyor
Ship's Name <i>Stephen & Sons No. 557</i>	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	
Moulded Dimensions: Length <i>530.33</i> Breadth <i>73.00</i> Depth <i>37.00 to E deck</i>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					
Coefficient of fineness for use with Tables <i>70 (assumed)</i>					
Particulars of Classification <i>100 A1 with freeboard corresponding to a summer draft of 29'-11 1/2"</i>					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>37.00</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(37.04 - 35.35) 3 = + 5.07</i>	Moulded Breadth (B) <i>73.00</i>
Plate <i>0.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{73 \times 12}{50} = 17.52$
Heating on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <i>4"</i>
Depth for Freeboard (D) = <i>37.04</i>		Difference <i>13.52 difference</i>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{13.52}{4} \times 1 = + 3.38$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	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 <i>7.5</i>
„ „ R.Q.D. <i>4.2</i>
Deduction for complete superstructure
Percentage covered $\frac{S}{L} =$
„ „ $\frac{S_1}{L} =$
„ „ $\frac{E}{L} =$
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 = <i>-42"</i>

SHEER CORRECTION.

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

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 = *65*
„ „ aft of „ = *65*

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{38.70}{18} (.25) = - 1.075$

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. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40T}$ inches	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient <i>70 + 68 = 138</i> <i>136 = 136</i>
Depth to Freeboard Deck = <i>37.04</i> Summer freeboard = <i>6.54</i> Moulded draught (d) = <i>30.50</i>		
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =		
Addition for Winter North Atlantic Freeboard (if required) =		

Depth Correction	5.07
Deduction for superstructures	42.00
Sheer correction	5.4
Round of Beam correction	3.38
Correction for Thickness of Deck amidships	
Other corrections, scantlings, etc.54
Summer Freeboard =	<i>27.22</i>

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 „ „