

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>"Calcutta"</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <i>152.00'</i> Breadth <i>27.50'</i> Depth <i>15.00'</i> <i>96% L on 6 LNL.</i>					Date of Survey <i>10th July '50.</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>830.</i> tons					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.18</i>					Particulars of Classification <i>100 A1</i>

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth <i>15.00</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(15.03 - 10.13) 1.169 = +5.73</i> ✓	Moulded Breadth (B) <i>27.50'</i>
Stringer plate <i>.32</i> <i>.03</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>4.90</i> ✓	Standard Round of Beam = $\frac{B \times 12}{50} = 6.60"$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = <i>7.00"</i>
Depth for Freeboard (D) = <i>15.03</i>		Difference <i>.40</i>
		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.40}{4} \times 83.55 = - .08"$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed					
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed	<i>25.00</i>	<i>25.00</i>	<i>6'-1"</i>	✓	<i>25.00</i>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	<i>25.00</i>	<i>25.00</i>			<i>25.00</i>

Standard Height of Superstructure <i>6.00</i>	
" " R.Q.D. ✓	
Deduction for complete superstructure <i>21.20</i>	
Percentage covered $\frac{S}{L} =$	
" " $\frac{S_1}{L} =$	<i>16.45</i> ✓
" " $\frac{E}{L} =$	
Percentage from Table, Line A. <i>8.23</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 = <i>21.20 × .0823 = 1.74"</i>	

SHEER CORRECTION.									
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<i>25.20</i>	1		<i>25.20</i>	<i>34.00</i>	<i>34.00</i>	1		<i>34.00</i>
$\frac{1}{2}$ L from A.P.	<i>11.21</i>	4		<i>44.84</i>	<i>15.00</i>	<i>15.00</i>	4		<i>60.00</i>
$\frac{2}{6}$ L "	<i>2.77</i>	2		<i>5.54</i>	<i>4.00</i>	<i>4.00</i>	2		<i>8.00</i>
Amidships	<i>—</i>	4		<i>—</i>	<i>—</i>	<i>—</i>	4		<i>—</i>
$\frac{2}{6}$ L from F.P.	<i>5.54</i>	2		<i>11.08</i>	<i>8.00</i>	<i>8.00</i>	2		<i>16.00</i>
$\frac{1}{2}$ L "	<i>22.43</i>	4		<i>89.72</i>	<i>27.00</i>	<i>27.00</i>	4		<i>108.00</i>
F.P.	<i>50.40</i>	1		<i>50.40</i>	<i>52.00</i>	<i>52.00</i>	1		<i>52.00</i>
Total				<i>226.78</i>					<i>278.00</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 = $\frac{L}{2}$
" " aft of " = $\frac{L}{2}$ ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{51.22}{18} (.75 - .0823) = -1.90"$
If limited on account of midship superstructure. *Yes. Nil.* ✓

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>15.03</i> Summer freeboard = <i>1.65</i> Moulded draught (d) = <i>13.38</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>3.35 = 3\frac{1}{4}"</i> Addition for Winter North Atlantic Freeboard (if required) = <i>5\frac{1}{4}"</i>	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 = $\frac{\Delta}{40 T}$ inches = <i>4\frac{1}{4} = 3\frac{1}{4}"</i>	TABULAR FREEBOARD corrected for Flush Deck (if required) <i>15.78</i> Correction for coefficient <i>N/L.</i> <i>15.78</i> ✓ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td><i>5.73</i></td> <td><i>—</i></td> </tr> <tr> <td>Deduction for superstructures</td> <td><i>—</i></td> <td><i>1.74</i></td> </tr> <tr> <td>Sheer correction</td> <td><i>—</i></td> <td><i>—</i></td> </tr> <tr> <td>Round of Beam correction</td> <td><i>—</i></td> <td><i>.08</i></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td><i>—</i></td> <td><i>—</i></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td><i>—</i></td> <td><i>—</i></td> </tr> <tr> <td></td> <td><i>5.73</i></td> <td><i>1.82</i></td> </tr> </table> Summer Freeboard = <i>19.69</i> ✓ <i>25.7.00</i> <i>25.7.00</i>		+	-	Depth Correction	<i>5.73</i>	<i>—</i>	Deduction for superstructures	<i>—</i>	<i>1.74</i>	Sheer correction	<i>—</i>	<i>—</i>	Round of Beam correction	<i>—</i>	<i>.08</i>	Correction for Thickness of Deck amidships	<i>—</i>	<i>—</i>	Other corrections, scantlings, etc.	<i>—</i>	<i>—</i>		<i>5.73</i>	<i>1.82</i>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck :—

Tropical Fresh Water Line above Centre of Disc	<i>6\frac{1}{2}"</i>	Tropical Fresh Water Freeboard	<i>1\frac{1}{2}"</i>
Fresh Water Line " "	<i>3\frac{1}{4}"</i>	Fresh Water " "	<i>1\frac{1}{4}"</i>
Tropical Line " "	<i>3\frac{1}{4}"</i>	Tropical " "	<i>1\frac{1}{2}"</i>
Winter Line below " "	<i>3\frac{1}{4}"</i>	Winter " "	<i>1\frac{1}{2}"</i>
Winter North Atlantic Line " "	<i>5\frac{1}{4}"</i>	Winter North Atlantic " "	<i>2\frac{1}{2}"</i>