

Amended computation

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.  
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 37178  
(For London Office only).

Ship's Name <i>"Empire Clyde"</i>	Official Number 159356	Nationality and Port of Registry <i>British Mumbai.</i>	Gross Tonnage 7515	Date of Build 1925	Port of Survey
Moulded Dimensions: Length <i>429.25</i> Breadth <i>52.50</i> Depth <i>39.17</i>					Date of Survey <i>22-3-44.</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.71 (assumed)</i>					Particulars of Classification <i>100A1 with fuel tank.</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... .. <i>39.17</i>	(a) Where D is greater than Table depth (D-Table depth) R = <i>(39.21-28.62) x 3 = +31.77</i> <i>10.59</i>	Moulded Breadth (B) <i>52.5</i>
Stringer plate ... .. <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = 12.60$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$		Ship's Round of Beam = <i>12.00</i>
Depth for Freeboard (D) = <i>39.21</i>	If restricted by superstructures	Difference <i>.60</i>
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.60}{4} \times .8683 = .13$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..					
.. overhang ... ..					
R.Q.D. enclosed ... ..					
.. overhang ... ..					
Bridge enclosed ... ..					
.. overhang aft ... ..					
.. overhang forward ... ..					
Forecastle enclosed ... ..	<i>113.08</i>	<i>56.54</i>	<i>7.75</i>	<i>-</i>	<i>56.54</i>
.. overhang ... ..					
Trunk aft ... ..					
.. forward ... ..					
Tonnage opening aft ... ..					
.. forward ... ..					
Total ... ..	<i>113.08</i>	<i>56.54</i>			<i>56.54</i>

Standard Height of Superstructure *7.5'*  
" " R.Q.D. *✓*  
Deduction for complete superstructure *42'*  
Percentage covered  $\frac{S}{L} = 26.34$   
" "  $\frac{S_1}{L} = 13.17$   
" "  $\frac{E}{L} =$   
Percentage from Table, Line A. *6.58*  
(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 x .0658 = -2.76*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<i>52.92</i>	1		<i>52.92</i>	<i>48</i>	<i>48</i>	1		<i>48</i>
$\frac{1}{2}$ L from A.P. ... ..	<i>23.555</i>	4		<i>94.22</i>	<i>14</i>	<i>14</i>	4		<i>56</i>
$\frac{3}{8}$ L .. ..	<i>5.82</i>	2		<i>11.64</i>	<i>4</i>	<i>4</i>	2		<i>8</i>
Amidships ... ..	<i>-</i>	4		<i>-</i>	<i>-</i>	<i>-</i>	4		<i>-</i>
$\frac{3}{8}$ L from F.P. ... ..	<i>11.64</i>	2		<i>23.28</i>	<i>3</i>	<i>3</i>	2		<i>6</i>
$\frac{1}{2}$ L .. ..	<i>47.11</i>	4		<i>188.44</i>	<i>22</i>	<i>22</i>	4		<i>88</i>
F.P. ... ..	<i>105.85</i>	1		<i>105.85</i>	<i>63</i>	<i>63</i>	1		<i>63</i>
Total ... ..				<i>476.35</i>					<i>269</i>

Mean actual sheer aft = *Deficient*  
Mean standard sheer aft =  
Mean actual sheer forward = *Deficient (less than 50%)*  
Mean standard sheer forward =  
Length of enclosed superstructure forward of amidships = *✓ Nil*  
" " aft of " =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{207.35}{18} (.75 - .1317) = +7.12$   
If limited on account of midship superstructure. *✓* *.6183* 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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Depth to Freeboard Deck = <i>39.21</i> ✓ Summer freeboard = <i>10.67</i> ✓ Moulded draught (d) = <i>28.54</i> ✓	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 <i>d/in = 7 1/4</i> ✓	Correction for coefficient $\frac{.71 + .68}{1.36} = \frac{1.39}{1.36} =$ Depth Correction ... .. <i>31.77</i> Deduction for superstructures ... .. <i>-2.76</i> Sheer correction ... .. <i>7.12</i> Round of Beam correction ... .. <i>.13</i> Correction for Thickness of Deck amidships ... .. Other corrections, scantlings, etc. <i>9.30</i> <i>Max summer moulded draught + 28'-0 1/2"</i> Summer Freeboard = <i>128.00</i>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>7.13 = 7 1/4</i> ✓ Addition for Winter North Atlantic Freeboard (if required) =		<i>80.67</i> <i>82.44</i> <i>82.8</i> <i>22-3-44</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>8 3/4"</i>	Tropical Fresh Water Freeboard ... .. <i>3</i>
Fresh Water Line " " ... .. <i>7 1/4"</i>	Fresh Water " " ... .. <i>3</i>
Tropical Line " " ... .. <i>1 1/2"</i>	Tropical " " ... .. <i>3</i>
Winter Line below " " ... .. <i>7 1/4"</i>	Winter " " ... .. <i>3</i>
Winter North Atlantic Line " " ... .. <i>-</i>	Winter North Atlantic " " ... .. <i>3</i>

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