

*Basic computation to scantling purposes only*  
*C.S.S.*

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name <i>Greenock Ship Co. Ltd</i> <i>Mar No 454</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <i>470.5</i> ✓ <i>centre of main deck</i>	Breadth <i>65.5</i> ✓	Depth <i>32.38</i> ✓			Date of Survey <i>20-4-42</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables <i>.68 (actual: len) ✓</i>					Particulars of Classification <i>wood with fibrous (Contemplated)</i>

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... ✓ <i>32.38</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>(32.38 - 31.36) 3 = + 3.06</i>	Moulded Breadth (B)
Stringer plate ... ✓ <i>.04</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam =
Depth for Freeboard (D) = <i>32.38</i>		Difference <i>assumed standard</i>
		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <i>Nil</i>

### 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 ...					
F'cle enclosed ...					
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...					

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Standard Height of Superstructure *7.5*

„ „ R.Q.D. *42" ✓*

Deduction for complete superstructure *42" ✓*

Percentage covered  $\frac{S}{L} =$

„ „  $\frac{S_1}{L} =$  } *100%*

„ „  $\frac{E}{L} =$

Percentage from Table, Line A. *100% ✓*  
(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 1.0 = -42.00 ✓*

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...		1					1		
$\frac{1}{4}L$ from A.P. ...		4					4		
$\frac{2}{4}L$ „ ...		2					2		
Amidships ...		4					4		
$\frac{2}{4}L$ from F.P. ...		2					2		
$\frac{1}{4}L$ „ ...		4					4		
F.P. ...		1					1		
Total ...									

*assumed standard*

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

„ „ aft of „ =

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) =$  *-.50 ✓*

If limited on account of midship superstructure. If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <i>32.38</i> Summer freeboard = <i>4.51</i> Moulded draught (d) = <i>27.87</i> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <i>6.97</i> Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> 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 =	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient <i>Nil</i> <table border="1"> <tr><td>+</td><td>-</td></tr> <tr><td><i>.18</i></td><td></td></tr> <tr><td><i>3.06</i></td><td></td></tr> <tr><td></td><td><i>42.00</i> ✓</td></tr> <tr><td></td><td><i>.50</i> ✓</td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td><i>.18</i></td><td></td></tr> <tr><td><i>3.06</i></td><td><i>42.50</i></td></tr> <tr><td></td><td><i>- 39.44</i></td></tr> <tr><td></td><td><i>54.01.13</i></td></tr> </table> Summer Freeboard = <i>54.01.13</i>	+	-	<i>.18</i>		<i>3.06</i>			<i>42.00</i> ✓		<i>.50</i> ✓					<i>.18</i>		<i>3.06</i>	<i>42.50</i>		<i>- 39.44</i>		<i>54.01.13</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 ...	Tropical Fresh Water Freeboard ...
Fresh Water Line „ „ ...	Fresh Water „ „ ...
Tropical Line „ „ ...	Tropical „ „ ...
Winter Line below „ „ ...	Winter „ „ ...
Winter North Atlantic Line „ „ ...	Winter North Atlantic „ „ ...

