

*Specimen computation
for guidance only*

Index No. 39640
(For London Office only.)

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name SCINDIA YARB NO V.C. 109 (NILLA TYPE)	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length <u>150.21'</u> Breadth <u>29.</u> Depth <u>10.25'</u>	Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons				Date of Survey <u>1.3.48</u>
Coefficient of fineness for use with Tables <u>.68 (assumed)</u>				Surveyor's Signature _____	
				Particulars of Classification <u>contemplated</u>	

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	<u>10.25</u>	(a) Where D is greater than Table depth (D - Table depth) R = $(10.44 - 10.01) \times 1.165 = +.50"$		Moulded Breadth (B)	<u>29.0</u>
Stringer plate	<u>.26</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = $.43$		Standard Round of Beam = $\frac{B \times 12}{50} =$	<u>6.96</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .21 \times .883 =$	<u>.17</u>	If restricted by superstructures		Ship's Round of Beam =	<u>7.25</u>
Depth for Freeboard (D) =	<u>10.44</u>			Difference	<u>Excess .29</u>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L}\right) =$	$\frac{.29 \times 87.81}{4} = .06$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>4.75</u>	<u>4.75</u>	<u>7.5</u>	-	<u>4.75</u>
" overhang	<u>19.75</u>	<u>9.88</u>	<u>7.5</u>	-	<u>9.88</u>
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed <i>Open</i>	<u>4.30</u>	<u>3.68</u>	<u>7.5</u>	-	<u>3.68</u>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	<u>28.80</u>	<u>18.31</u>			<u>18.31</u>

Standard Height of Superstructure 6.00
" " R.Q.D. 21.02
Deduction for complete superstructure 21.02
Percentage covered $\frac{S}{L} = 19.17$
" " $\frac{S_1}{L} = 12.19$
" " $\frac{E}{L} = 12.19$
Percentage from Table, Line A. 6.09
~~(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 = $21.02 \times .0609 = -1.28$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>25.02</u>	1		<u>25.02</u>	<u>25.00</u>	<u>25.02</u>	1		<u>25.02</u>
$\frac{1}{2}L$ from A.P.	<u>11.135</u>	4		<u>44.54</u>	<u>14.00</u>	<u>11.135</u>	4		<u>44.54</u>
$\frac{3}{4}L$ "	<u>2.75</u>	2		<u>5.50</u>	<u>3.00</u>	<u>2.75</u>	2		<u>5.50</u>
Amidships		4					4		
$\frac{3}{4}L$ from F.P.	<u>5.505</u>	2		<u>11.01</u>	<u>4.00</u>	<u>4.00</u>	2		<u>8.00</u>
$\frac{1}{2}L$ "	<u>22.27</u>	4		<u>89.08</u>	<u>19.00</u>	<u>19.00</u>	4		<u>76.00</u>
F.P.	<u>50.04</u>	1		<u>50.04</u>	<u>45.00</u>	<u>45.00</u>	1		<u>45.00</u>
Total				<u>225.19</u>					<u>204.06</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{21.13}{78} \left(\frac{.75 - .0958}{.6542} \right) = +.77$
If limited on account of midship superstructure.

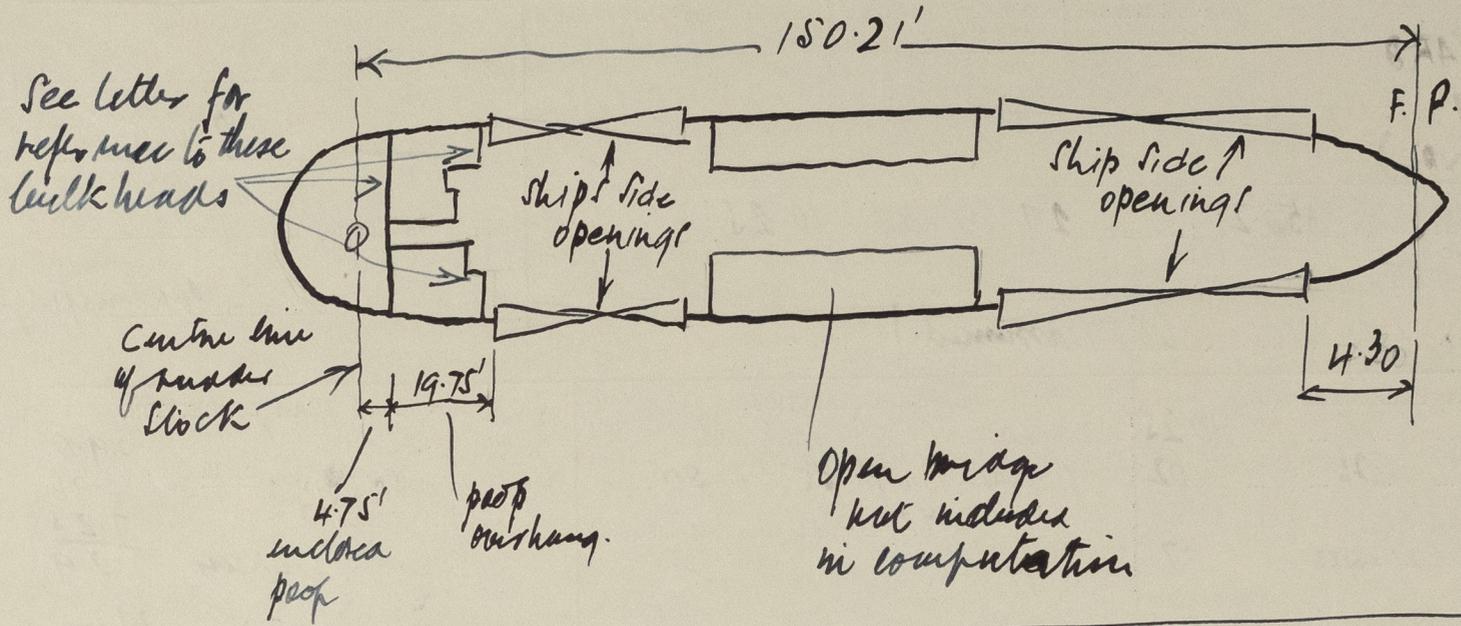
Mean actual sheer aft = Excess
Mean standard sheer aft = Deficient
Length of enclosed superstructure forward of amidships = Nil
" " aft of " = Nil

<p>Deduction for Tropical Freeboard.</p> <p>Addition for Winter and Winter North Atlantic Freeboard.</p> <p>Depth to Freeboard Deck = <u>10.48</u> Ft.</p> <p>Summer freeboard = <u>2.48</u></p> <p>Moulded draught (d) = <u>8.00</u></p> <p>Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>2</u></p> <p>Addition for Winter North Atlantic Freeboard (if required) =</p>	<p>Deduction for Fresh Water.</p> <p>Displacement in salt water at summer load water line</p> <p>$\Delta =$</p> <p>Tons per inch immersion at summer load water line</p> <p>T =</p> <p>Deduction = $\frac{\Delta}{40 T}$ inches</p> <p>$\frac{d}{4} = 2$</p>	<p>TABULAR FREEBOARD corrected for Flush Deck (if required)</p> <p>Correction for coefficient <u>Nil</u></p> <table border="1"> <tr> <td></td> <td>+</td> <td>-</td> </tr> <tr> <td>Depth Correction</td> <td><u>.50</u></td> <td><u>1.28</u></td> </tr> <tr> <td>Deduction for superstructures</td> <td><u>.77</u></td> <td><u>.06</u></td> </tr> <tr> <td>Round of Beam correction</td> <td><u>.48</u></td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td><u>13.81</u></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td><u>15.56</u></td> <td><u>1.34</u></td> </tr> <tr> <td>Summer Freeboard =</td> <td><u>29.78</u></td> <td></td> </tr> </table> <p><i>compared with a summer moulded draught of 8'-0"</i></p> <p><u>2'-5 3/4"</u></p>		+	-	Depth Correction	<u>.50</u>	<u>1.28</u>	Deduction for superstructures	<u>.77</u>	<u>.06</u>	Round of Beam correction	<u>.48</u>		Correction for Thickness of Deck amidships	<u>13.81</u>		Other corrections, scantlings, etc.	<u>15.56</u>	<u>1.34</u>	Summer Freeboard =	<u>29.78</u>	
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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	

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

SCINDIA YARD NO VC 109.



Forward sheer
Seaward.

Actual.

0	1		0	1	0
5.505	3	16.515	4.0	3	12
22.27	3	66.810	19.0	3	57
50.04	1	50.040	45.0	1	45
		<u>133.365</u>			<u>114</u>

$$\frac{114}{133.365} = .8548$$

$$\text{Effective length of freeboard} = 4.30 \times .8548 = 3.68$$

Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation