

*Specimen computation
for guidance 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 150.21' Breadth 29. Depth 10.25'					Date of Survey 1.3.48
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature
Coefficient of fineness for use with Tables .68 (assumed)					Particulars of Classification Contingent

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 10.25	(a) Where D is greater than Table depth (D - Table depth) R = (10.44 - 10.01) 1.165 = +.50" ✓	Moulded Breadth (B) 29.0
Stringer plate26 ✓	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = .43 ✓	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{29.0 \times 12}{50} = 6.96$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .21 \times .883 = .185$ ✓	If restricted by superstructures	Ship's Round of Beam = 7.25
Depth for Freeboard (D) = 10.44 ✓		Difference Excess .29 ✓
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.29}{4} \times .8781 = .06$ ✓

DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure 6.00 ✓
Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	R.Q.D. 21.02" ✓
Poop enclosed ... 4.75 ✓	4.75	7.5	—	4.75	Deduction for complete superstructure
" overhang ... 19.75 ✓	9.88	7.5	—	9.88	Percentage covered $\frac{S}{L} = \frac{19.75}{12.19} = 1.619$ ✓
R.Q.D. enclosed ...					" $\frac{S_1}{L} = \frac{9.88}{12.19} = .811$ ✓
" overhang ...					" $\frac{E}{L} = \frac{4.75}{12.19} = .390$ ✓
Bridge enclosed ...					Percentage from Table, Line A. 6.09 ✓
" overhang aft ...					(corrected for absence of forecastle (if required))
" overhang forward ...					Percentage from Table, Line B.
Fore enclosed 4.30 ✓	3.68	7.5	—	3.68	(corrected for absence of forecastle (if required))
" overhang ...					Interpolation for bridge less than .2L (if required)
Trunk aft ...					Deduction = 21.02 x .0609 = -1.28" ✓
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ... 28.80	18.31			18.31	

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P. ...	25.02	1		25.02	25.00	25.02	1
$\frac{1}{2}$ L from A.P. ...	11.135	4		44.54	14.00	11.135	4
$\frac{3}{4}$ L " ...	2.75	2		5.50	3.00	2.75	2
Amidships ...	—	4		—	—	—	4
$\frac{3}{4}$ L from F.P. ...	5.505	2		11.01	4.00	4.00	2
$\frac{1}{2}$ L " ...	22.27	4		89.08	19.00	19.00	4
F.P. ...	50.04	1		50.04	45.00	45.00	1
Total ...				225.19			
Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{21.13(.75 - .0958)}{78} = +.77"$ ✓				If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.			

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient Nil
Depth to Freeboard Deck = 10.48	$\Delta =$	Depth Correction50
Summer freeboard = 2.48	Tons per inch immersion at summer load water line	Deduction for superstructures77
Moulded draught (d) = 8.00	T =	Sheer correction06
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2 ✓	Deduction = $\frac{\Delta}{40 T}$ inches	Round of Beam correction48
Addition for Winter North Atlantic Freeboard (if required) =	$\frac{d}{4} = 2$ ✓	Correction for Thickness of Deck amidships ... 13.81
		Other corrections, scantlings, etc. 15.56
		Summer Freeboard = 29.78 ✓

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 " " ...

