

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
					Date of Survey 29.11.47
Moulded Dimensions: Length 464 Breadth 61.5 Depth 34					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Particulars of Classification Tanker
Coefficient of fineness for use with Tables 0.72					

<b>DEPTH FOR FREEBOARD (D).</b> Moulded depth ... 34.0 Stringer plate ... 0.8 Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 34.08	<b>DEPTH CORRECTION.</b> (a) Where D is greater than Table depth $(D - \text{Table depth}) R = (34.08 - 30.93) \times 3 = +9.45$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	<b>ROUND OF BEAM CORRECTION.</b> Moulded Breadth (B) Standard Round of Beam = $\frac{B \times 12}{50} =$ Ship's Round of Beam 14.5 = Compound Difference Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \text{Nil}$
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DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	9.8				
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...	4.2				
„ overhang aft ...					
„ overhang forward ...					
Fore enclosed Equ ...	5.2				
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	19.2				

Standard Height of Superstructure 7.5	R.Q.D. 4.2
Deduction for complete superstructure	
Percentage covered $\frac{S}{L} =$	
„ $\frac{S_1}{L} =$	41.37
„ $\frac{E}{L} =$	32.37
Percentage from Table, Line A. (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 =	4.2 x 32.37 = 13.6

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	56.4	1		56.4		1	
$\frac{1}{8}L$ from A.P. ...		4				4	
$\frac{2}{8}L$ „ ...		2				2	
Amidships ...		4				4	
$\frac{2}{8}L$ from F.P. ...		2				2	
$\frac{1}{8}L$ „ ...		4				4	
F.P. ...		1		10.8		1	
Total ...			507.6				48.6

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{21.6 \times 75 - 2069}{18} = +.65$   
 If limited on account of midship superstructure. If limited to maximum allowance of 1½ ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = 34.0 Summer freeboard = 6.46 Moulded draught (d) = 27.54 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 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 = $\frac{\Delta}{40 T}$ inches =	<b>TABULAR FREEBOARD corrected for Flush Deck (if required)</b> Correction for coefficient 1.40/1.31 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td>9.45</td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td>13.6</td> </tr> <tr> <td>Sheer correction</td> <td>6.5</td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td></td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td></td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> <td></td> </tr> <tr> <td></td> <td>10.10</td> <td>13.6</td> </tr> </table> Summer Freeboard = 79.52		+	-	Depth Correction	9.45		Deduction for superstructures		13.6	Sheer correction	6.5		Round of Beam correction			Correction for Thickness of Deck amidships			Other corrections, scantlings, etc.				10.10	13.6
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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 „ „ ...