

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 35249
(For London Office only).

Ship's Name S.H. W.R. <i>year 1570.</i>	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey
Moulded Dimensions: Length 440.0 Breadth 61.0 Depth 28.25					Date of Survey 1.7.37
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12645 tons					Surveyor's Signature
Coefficient of fineness for use with Tables .687					Particulars of Classification 100M <i>(Completed 1.)</i>

Depth for Freeboard (D). Moulded depth ... 28.25 Stringer plate04 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = .21 \times 1246 = .03$ Depth for Freeboard (D) = 28.32	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = (b) Where D is less than Table depth (if allowed) (Table depth-D) R = $(29.33-28.32) \times 3 = -3.03$ If restricted by superstructures <i>4.12</i>	Round of Beam correction. Moulded Breadth (B) 61 Standard Round of Beam = $\frac{B \times 12}{50} = 14.64$ Ship's Round of Beam = 9.00 Difference 5.64 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{5.64}{4} \times \frac{2486}{440} = +.35$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	75.08	75.08	7.75	-	75.08	Standard Height of Superstructure 7.5 " " R.Q.D.
" overhang ...	5.00	2.50	"	-	2.50	
R.Q.D. enclosed ...						Deduction for complete superstructure 42
" overhang ...						Percentage covered $\frac{S}{L} = 87.54$
Bridge enclosed...	183.42	165.08	7.75	-	165.08	" " $\frac{S_1}{L} = 75.14$
" overhang aft ...	20.50	15.37	"	-	15.37	" " $\frac{E}{L} = 75.14$
" overhang forward	34.83	17.41	"	-	17.41	Percentage from Table, Line A. ✓ (corrected for absence of forecastle (if required))
Fore enclosed ...	23.58	23.58	8.0	-	23.58	Percentage from Table, Line B. 69.32 (corrected for absence of forecastle (if required))
" overhang ...	42.75	31.56	"	-	31.56	Interpolation for bridge less than 2L (if required) ✓
Trunk aft ...						Deduction = 42 x .6932 = -29.11
" forward ...						
Tonnage opening aft ...						
" " forward						
Total ...	385.16	330.58			330.58	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	54.00	1		54.00	35.5	35.5	1		35.5	Mean actual sheer aft = <i>Deficient</i> Mean standard sheer aft
1/4 L from A.P. ...	24.03	4		96.12	11.0	11.0	4		44.0	
1/2 L " ...	5.94	2		11.88	-1.0	-1.0	2		-2.0	Mean actual sheer forward = 99.92 Standard Mean standard sheer forward
3/4 L " ...										
Amidships ...		4					4			Length of enclosed superstructure forward of amidships = L
1/4 L from F.P. ...	11.88	2		23.76	15.5	15.5	2		31.0	
1/2 L " ...	48.06	4		192.24	48.0	48.0	4		192.0	aft of Sheer (forward standard) <i>actual</i> 11.88 3 35.64 15.5 3 46.5 48.06 3 144.18 48.0 3 144.0 108.00 1 108.00 97.0 1 97.0 282.82 282.5
F.P. ...	108.00	1		108.00	97.0	97.0	1		97.0	
Total ...				486.00					397.5	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{88.5}{18} \left(\frac{75-4377}{2L} \right) = +1.54$
 If limited on account of midship superstructure. ✓

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 28.29 Summer freeboard = 47.5 Moulded draught (d) = 23.54 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5.88 = 6" Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. 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 =	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.687 + .68}{1.36} = \frac{1.367}{1.36} =$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td></td> <td></td> </tr> <tr> <td>Deduction for superstructures</td> <td></td> <td>29.11</td> </tr> <tr> <td>Sheer correction</td> <td>1.54</td> <td></td> </tr> <tr> <td>Round of Beam correction</td> <td>0.35</td> <td></td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td></td> <td>0.36</td> </tr> <tr> <td>Other corrections, scantlings, etc.</td> <td></td> <td></td> </tr> <tr> <td></td> <td>1.89</td> <td>29.47</td> </tr> <tr> <td>Summer Freeboard</td> <td colspan="2">56.85</td> </tr> </table>		+	-	Depth Correction			Deduction for superstructures		29.11	Sheer correction	1.54		Round of Beam correction	0.35		Correction for Thickness of Deck amidships		0.36	Other corrections, scantlings, etc.				1.89	29.47	Summer Freeboard	56.85	
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 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	