

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name Incicator.	Official Number	Nationality and Port of Registry Finnish Helsingfors.	Gross Tonnage 4661	Date of Build 1920 9	Port of Survey
Moulded Dimensions: Length 385'00 Breadth 57'75' Depth 29'25'					Date of Survey 24.7.48.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 11069 tons					Surveyor's Signature [Signature]
Coefficient of fineness for use with Tables .782					Particulars of Classification +100 A1.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 29'25"	(a) Where D is greater than Table depth (D-Table depth) R = (29.29 - 28.67) 2.962 = + 10.72"	Moulded Breadth (B) 57'75"
Stringer plate04	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ 12.42"
Sheathing on exposed deck ✓	If restricted by superstructures ✓	Ship's Round of Beam = 13.00"
$T \left(\frac{L-S}{L} \right) =$		Difference .58"
Depth for Freeboard (D) = 29'29"		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) =$.58 x .4866 = .281"

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	57'83"	57'83"	8'00"	✓	57'83"
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	114'83"	114'83"	8'00"	✓	114'83"
" overhang aft ...					
" overhang forward ...					
Fore enclosed ...	45'00"	45'00"	8'00"	✓	45'00"
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	197'66"	197'66"			197'66"

Standard Height of Superstructure **7'35"**

" " R.Q.D. **✓**

Deduction for complete superstructure **41'00"**

Percentage covered $\frac{S}{L} =$ **.5734**

" " $\frac{S_1}{L} =$ **.5734**

" " $\frac{E}{L} =$ **.5734**

Percentage from Table, Line A. **✓**

(corrected for absence of forecastle (if required)) **✓**

Percentage from Table, Line B. **37.34**

(corrected for absence of forecastle (if required)) **✓**

Interpolation for bridge less than .2L (if required) **✓**

Deduction = **41.00" x .3734 = - 15.31"**

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	Product
A.P. ...	48'50"	1	✓	48'50"	62'00"	62'00"	62'00"
$\frac{1}{8}L$ from A.P. ...	21'38"	4	✓	86'32"	25'50"	25'50"	102'00"
$\frac{2}{8}L$ " ...	5'34"	2	✓	10'68"	3'50"	3'50"	7'00"
Amidships ...	✓	4	✓	✓	✓	✓	✓
$\frac{3}{8}L$ from F.P. ...	10'68"	2	✓	21'36"	4'00"	4'00"	8'00"
$\frac{4}{8}L$ " ...	48'16"	4	✓	172'64"	45'50"	45'50"	182'00"
F.P. ...	97'00"	1	✓	97'00"	125'00"	125'00"	125'00"
Total ...				436'50"			486'00"

Mean actual sheer aft = **Excess.**

Mean standard sheer aft = **Excess.**

Mean actual sheer forward = **Excess.**

Mean standard sheer forward = **Excess.**

Length of enclosed superstructure forward of amidships = **Greater than .1L.**

" " aft of " = **.1L.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{S}{.75 - 2L} \right) =$ **$\frac{49.50 - .2567}{18} = - 1.36"$**

If limited on account of midship superstructure. **✓**

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	Corrected for Flush Deck (if required)
Depth to Freeboard Deck = 29'29"	$\Delta =$.782 + .68 = 1.462 / .36
Summer freeboard = 5'50"	Tons per inch immersion at summer load water line	Correction for coefficient .36
Moulded draught (d) = 23'79"	T =	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 5'95"	Deduction = $\frac{\Delta}{40 T}$ inches	
Addition for Winter North Atlantic Freeboard (if required) =		

	+	-
Depth Correction	10.72	✓
Deduction for superstructures	15.31	✓
Sheer correction	1.36	✓
Round of Beam correction	.07	✓
Correction for Thickness of Deck amidships	✓	✓
Other corrections, scantlings, etc.	✓	✓
	10.72	16.74
Summer Freeboard =	66.90"	71.92"

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood Steel, Deck :-			
Existing freeboards re-assigned 1948	Tropical Fresh Water Line above Centre of Disc 292 m/m.	Tropical Fresh Water Freeboard 1397	
	Fresh Water Line " 152	Fresh Water " 1537	
	Tropical Line " 140	Tropical " 1549	
	Winter Line below " 127	Winter " 1816	
	Winter North Atlantic Line " ✓	Winter North Atlantic " ✓	

1689 m/m.

1397

1537

1549

1816

26.7.48

- 6.02"

Summer Freeboard = **65.90"**