

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Port of Survey

(Type of Superstructures.)

Date of Survey

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

ELMWORTH.

British
Newcastle

148102

4963

1924

Name of Surveyor

Moulded Dimensions: Length 399.66' Breadth 53.00' Depth 29.62'
Moulded displacement at moulded draught = 85 per cent. of moulded depth 11770 tons
Coefficient of fineness for use with Tables 772

Particulars of Classification +100 A.1.

Depth for Freeboard (D)

Depth correction

Round of Beam correction

Moulded depth ...

(a) Where D is greater than Table depth
(D - Table depth) R =

Moulded Breadth (B)

Stringer plate ...

+9.03"

Standard Round of Beam = $\frac{B \times 12}{50}$ =

Sheathing on exposed deck

(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =

Ship's Round of Beam =

$T \left(\frac{L-S}{L} \right) =$

Difference

Depth for Freeboard (D) =

29.66

If restricted by superstructures

Restricted to
Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = -1.10"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
Forecastle enclosed ...					
" overhang ...					
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...					

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

41.98"

Percentage covered $\frac{S}{L} =$

" " $\frac{S_1}{L} =$

" " $\frac{E}{L} =$

47.40% ✓

Percentage from Table, Line A.

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

Timber 67.62% ✓

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $41.98 \times .6762 = -28.38"$ ✓

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
P. ...		1				1	
1/4 L from A.P. ...		4				4	
1/2 L " ...		2				2	
Amidships ...		4				4	
3/4 L from F.P. ...		2				2	
1/4 L " ...		4				4	
F.P. ...		1				1	
Total ...							

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = -2.55"$ ✓

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 = 29.66'
Summer freeboard = 4.52'
Moulded draught (d) = 25.14'

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 11800$
Tons per inch immersion at summer load water line
 $T = 429$

Deduction = $\frac{\Delta}{40T}$ inches
= 6.88"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	9.03	-
Deduction for superstructures ...	-	28.38
Sheer correction ...	-	2.55
Round of Beam correction ...	-	.10
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	9.03	31.03

Summer Freeboard = 54.21" ✓

Timber SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 378 4'-6 1/4" ✓

Timber Tropical Fresh Water Line above Centre of Disc 6.92 ... 27 1/4"

" Fresh Water Line " " 5.33 ... 21"

" Tropical Line " " 5.14 ... 20 1/4"

" Winter Line below above 1.40 ... 5 1/2"

" Winter North Atlantic Line " below 1.59 ... 5"

Timber Tropical Fresh Water Freeboard ... 10.42 ... 3'-5"

" Fresh Water " " 12.01 ... 3'-11 1/4"

" Tropical " " 12.00 ... 4'-0"

" Winter " " 15.94 ... 5'-2 3/4"

" Winter North Atlantic " " 18.61 ... 6'-2 1/2"