

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Flush deck.

(Type of Superstructures.)

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

WALTER JENNINGS.

Bayonne.
U.S.A.

1921

Moulded Dimensions: Length 500.0

Breadth 68.0

Depth 38.875

Moulded displacement at moulded draught = 85 per cent. of moulded depth 26,300 x .995 (from scale) tons

Coefficient of fineness for use with Tables .815

Port of Survey

Date of Survey 15-9-31.

Name of Surveyor

Particulars of Classification +100 A1
Shelter deck with freeboard
Carrying Petroleum in Bulk.

Depth for Freeboard (D)

Moulded depth 38.87

Stringer plate06

Heating on exposed deck ✓

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

Depth for Freeboard (D) = 38.93

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R = ✓
 $(38.93-33.33) \times 3 = +16.80$ ✓

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

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B)

Standard Round of Beam = $\frac{B \times 12}{50} = \frac{16 \times 12}{50} = 16.32$ ✓

Ship's Round of Beam = 15.00 ✓

Difference 1.32 ✓

Restricted to

Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.32^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.32}{4} \times 4 = +33.$ ✓

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

Percentage covered $\frac{S}{L} = \frac{7\% \text{ Forecastle} = 35'-0\"}{50} = 7\%$ ✓

„ „ $\frac{S_1}{L} = \frac{\% \text{ covered} = 7\%}{50}$ ✓

„ „ $\frac{E}{L} = \frac{\text{Corresponding } \% = 4.9}{50}$ ✓

Percentage from Table, Line A. allowance

(corrected for absence of forecastle (if required)) 42 x .049

Percentage from Table, Line B. 2.06

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = Penalty for forecastle +2.06 ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
... ..	60.00	1		60.00	58.00	58.00	1		58.00
„ A.P.	26.70	4		106.80	14.00	14.00	4		56.00
„ „	6.60	2		13.20	1.50	1.50	2		3.00
„ „	-	4		-	-	-	4		-
„ F.P.	13.20	2		26.40	.50	.50	2		1.00
„ „	53.40	4		213.60	27.00	27.00	4		108.00
„ „	120.00	1		120.00	123.50	123.50	1		123.50
Total				540.00					349.50

Mean actual sheer aft = defective

Mean standard sheer aft

Mean actual sheer forward = defective = 64.6%

Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

„ „ aft of „ =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{190.5}{18} \times .75 = +7.94.$ ✓

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

Correction for Tropical Freeboard.

Correction for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 38.93

Summer freeboard = 10.28

Moulded draught (d) = 28.65

Correction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.16 ✓

Addition for Winter North Atlantic Freeboard (if required) = 5.0 ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = \frac{22,600}{(from scale)}$

Tons per inch immersion at summer load water line

$T = \frac{71.25}{(from scale)}$

Deduction = $\frac{\Delta}{40T}$ inches = 7.93 ✓

TANKER

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.815 + .68}{1.36}$

Depth Correction Penalty for no table 16.80 ✓

Deduction for superstructures 2.06 ✓

Sheer correction 7.94 ✓

Round of Beam correction33 ✓

Correction for Thickness of Deck amidships ✓

Other corrections, scantlings, etc. ✓

27.13 +27.13 ✓

Summer Freeboard = 123.32 ✓

Approximate Estimate of Summer Freeboard = 10'-3 3/4 ✓

Summer Freeboard assigned by American Bureau = 10'-3"