

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 54102

Computation of Freeboard for Steamer Sailing Ship, Tanker

having

Raised Quarter, Bridge & Forecastle

Port of Survey

Glasgow

Date of Survey

29th Dec. 1933

Name of Surveyor

R. B. Shepherd

Particulars of Classification

+100 A1

(contemplated)

Ship's Name

Nos 325 & 326

Nationality and Port of Registry

British

Official Number

Gross Tonnage

Date of Build

Moulded Dimensions: Length

142.5'

Breadth

23.5'

Depth

11.5'

Moulded displacement at moulded draught = 85 per cent. of moulded depth

657

tons

Coefficient of fineness for use with Tables

.707

Depth for Freeboard (D)

Moulded depth 11.42 ✓

Stringer plate 3002 ✓

Sheathing on exposed deck

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

Depth for Freeboard (D) =

11.44 ✓

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = $(11.44 - 9.50) 1.096 = 2.13 ✓$ (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)

23.5'

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

5.64 ✓

Ship's Round of Beam =

7.50 ✓

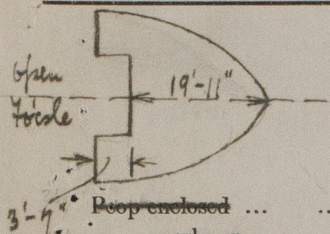
Difference

1.86 ✓

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.86}{4} \times 2.607 = .12 ✓$

DEDUCTION FOR SUPERSTRUCTURES.



	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Deep enclosed ...	-	-	-	-	-
" overhang ...	-	-	-	-	-
R.Q.D. enclosed ...	81.12 ✓	81.12 ✓	3'-3 1/2" ✓	-	81.12 ✓
" overhang ...	-	-	-	-	-
Bridge enclosed ...	7.16 ✓	7.16 ✓	6'-9" ✓	-	7.16 ✓
" overhang aft ...	-	-	-	-	-
" overhang forward ...	-	-	-	-	-
F'cle enclosed ...	19.92 ✓	14.25 ✓	7'-0" ✓	-	14.25 ✓
" overhang ...	-	2.83 ✓	-	-	2.83 ✓
Trunk aft ...	-	-	-	-	-
" forward ...	-	-	-	-	-
Tonnage opening aft ...	-	-	-	-	-
" forward ...	-	-	-	-	-
Total ...	108.20 ✓	105.36 ✓	-	-	105.36 ✓

Standard Height of Superstructure

6.0' ✓

" " R.Q.D.

3.283' ✓

Deduction for complete superstructure

20.25 ✓

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

75.92 ✓

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

73.93 ✓

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

73.93 ✓

Percentage from Table, Line A.

67.84 ✓

(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 = $20.25 \times 67.84 = -13.74 ✓$

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	24.25 ✓	1	24.25 ✓	26.00 ✓	26.00 ✓	1	26.00 ✓
1/8 L from A.P. ...	10.79 ✓	4	43.16 ✓	11.57 ✓	11.57 ✓	4	46.28 ✓
2/8 L " ...	2.67 ✓	2	5.34 ✓	2.86 ✓	2.86 ✓	2	5.72 ✓
Amidships ...	-	4	-	-	-	4	-
2/8 L from F.P. ...	5.34 ✓	2	10.68 ✓	5.39 ✓	5.39 ✓	2	10.78 ✓
1/8 L " ...	21.58 ✓	4	86.32 ✓	21.81 ✓	21.81 ✓	4	87.24 ✓
F.P. ...	48.50 ✓	1	48.50 ✓	49.00 ✓	49.00 ✓	1	49.00 ✓
Total ...	-	-	218.25 ✓	-	-	-	225.02 ✓

Mean actual sheer aft = Excess ✓
Mean standard sheer aftMean actual sheer forward = Excess ✓
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 119

" " aft of " = 500 ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{6.77}{18} (.75 - .3796) = -.14$

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 = 14.73 ✓

Summer freeboard = 3.54 ✓

Moulded draught (d) = 11.19 ✓

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 2.79, 2 3/4 ✓

Addition for Winter North Atlantic Freeboard (if required) = 2 "

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

=

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{767 + .68}{1.36} = \frac{1.387}{1.36} ✓$

Depth Correction 2.13 ✓

Deduction for superstructures 13.74 ✓

Sheer correction14 ✓

Round of Beam correction12 ✓

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

41.63 14.00 + 27.63 ✓

Summer Freeboard = 42.44 ✓

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	5 1/2" ✓
Fresh Water Line " " ...	2 3/4" ✓
Tropical Line " " ...	2 3/4" ✓
Winter Line below " " ...	2 3/4" ✓
Winter North Atlantic Line " " ...	4 3/4" ✓

Tropical Fresh Water Freeboard ...	3'-6 1/2" ✓
Fresh Water " " ...	3'-1" ✓
Tropical " " ...	3'-3 3/4" ✓
Winter " " ...	3'-3 3/4" ✓
Winter North Atlantic " " ...	3'-11 1/4" ✓