

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name GLENBRIDE	Official Number 143608	Nationality and Port of Registry BRITISH GLASGOW	Gross Tonnage 423	Date of Build 1919.	Port of Survey _____
Moulded Dimensions: Length 142.83' Breadth 25.0 Depth 12.75'					Date of Survey 11.7.49.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 774 tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables .700					Particulars of Classification +100 A1

DEPTH FOR FREEBOARD (D).
Moulded depth **12.75**
Stringer plate **.04**
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = **12.79**

DEPTH CORRECTION.
(a) Where D is greater than Table depth
(D-Table depth) R =
(12.79-9.52) 1.099 = + 3.59"
(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) **25.00'**
Standard Round of Beam = $\frac{B \times 12}{50} =$ **6.00"**
Ship's Round of Beam = **6.50"**
Difference **.50"**
Restricted to
Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.50}{4} \times .4234 = -.05"$

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	48.00	48.00	4.0	✓	48.00
" overhang					
Bridge enclosed <i>Equip.</i>	10.11	10.11	6.75	✓	10.11
" overhang aft					
" overhang forward					
F'cle enclosed	24.25	24.25	7.50	✓	24.25
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	82.36	82.36			82.36

Standard Height of Superstructure **6.00**
" " R.Q.D. **3.286'**
Deduction for complete superstructure **20.28"**
Percentage covered $\frac{S}{L} =$
" " $\frac{S_1}{L} =$ **57.66**
" " $\frac{E}{L} =$
Percentage from Table, Line A. **42.72**
(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 = **20.28 × .4272 = - 8.66"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	24.28	1		24.28	30.00	30.00	1		30.00
$\frac{1}{8}L$ from A.P.	10.80	4		43.20	13.03	13.03	4		52.12
$\frac{3}{8}L$ "	2.67	2		5.34	3.26	3.26	2		6.52
Amidships	✓	4		✓	✓	✓	4		✓
$\frac{5}{8}L$ from F.P.	5.34	2		10.68	5.53	5.53	2		11.06
$\frac{7}{8}L$ "	21.60	4		86.40	22.12	22.12	4		88.48
F.P.	48.56	1		48.56	51.00	51.00	1		51.00
Total				218.46					239.18

Mean actual sheer aft =
Mean standard sheer aft =

Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = **N/L**

" " aft of " = **.007**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75-S}{2L} \right) = \frac{20.72}{18} \left(\frac{.75-.2883}{.4617} \right) = -.53$
If limited on account of midship superstructure. **Yes. .53 × .007 = -.02"** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **✓**

Deduction for Tropical Freeboard.**Addition for Winter and Winter North Atlantic Freeboard.**

Depth to Freeboard Deck = **12.79**
Summer freeboard = **0.81**
Moulded draught (d) = **11.98**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **3"**

Addition for Winter North Atlantic Freeboard (if required) = **5"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 875$
Tons per inch immersion at summer load water line
 $T = 6.9$
Deduction = $\frac{\Delta}{40 T}$ inches
= $\frac{875}{40 \times 6.9}$
= **3.17"**
= **3 1/4"**

TABULAR FREEBOARD *corrected for Flush Deck (if required)*

Correction for coefficient

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

14.57

14.79

3.59

8.66

.02

.05

3.59

8.73

- 5.14

Summer Freeboard = 9.65

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

Tropical Fresh Water Line above Centre of Disc
Fresh Water Line " "
Tropical Line " "
Winter Line below " "
Winter North Atlantic Line " "

Tropical Fresh Water Freeboard
Fresh Water " "
Tropical " "
Winter " "
Winter North Atlantic " "

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11-0 3/4 (0-11 1/2 = 1906)
11-2 1/4 (0-2 1/2 = 1906)