

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER~~)

Ship's Name BALTRADER BALTIC FIR.	Official Number 180643	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage 1942	Date of Build 1945	Port of Survey.....
Moulded Dimensions: Length 281.00' Breadth 44.29' Depth 18.65'					Date of Survey 13.10.47
Moulded displacement at moulded draught = 85 per cent. of moulded depth.....tons					Surveyor's Signature E.T.
Coefficient of fineness for use with Tables .727 (est)					Particulars of Classification Exd. LR

DEPTH FOR FREEBOARD (D). Moulded depth 18.65 Stringer plate03 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 18.68	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = ✓ (b) Where D is less than Table depth (if allowed) (Table depth-D) R = (18.73-18.68) 2.162 = -.11" ✓ .05 If restricted by superstructures ✓	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 44.29' Standard Round of Beam = $\frac{B \times 12}{50} =$ 10.63" ✓ Ship's Round of Beam = 10.63 Difference 10.63 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$ $\frac{10.63}{4} \times .0081 = .0021$ ✓
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DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	23.00	23.00	8.25	✓	23.00
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft	152.09	152.09	8.25	✓	152.09
" overhang forward					
F'cle enclosed					
" overhang	1.83	1.37	8.25	✓	1.37
Trunk aft					
" forward					
Tonnage opening aft	4.08	2.27	1/2 DIFF		2.27
" " forward					
Total	281.00	278.73			278.73

Standard Height of Superstructure 6.31'
" " R.Q.D. ✓
Deduction for complete superstructure 34.07"
Percentage covered $\frac{S}{L} =$ 100
" " $\frac{S_1}{L} =$ 99.19
" " $\frac{E}{L} =$ 99.00
Percentage from Table, Line A. & B 99.00
(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 = 34.07 x .99 = - 33.73"

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	38.10	1	38.10	43.50	66.78	1	66.78
1/8 L from A.P.	16.955	4	67.82	22.75	29.72	4	118.88
2/8 L "	4.19	2	8.38	6.75	7.345	2	14.69
Amidships	-	4	-	-	-	4	-
2/8 L from F.P.	8.38	2	16.76	10.625	9.67	2	19.34
1/8 L "	33.91	4	135.64	32.25	39.115	4	156.46
F.P.	76.20	1	76.20	64.625	87.905	1	87.905
Total			342.90	+23.28			464.05

Mean actual sheer aft = **23.28**
Mean standard sheer aft = **23.28**

Mean actual sheer forward = **1.94**
Mean standard sheer forward = **1.94**

Length of enclosed superstructure forward of amidships = **19.34**
aft of amidships = **156.46**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{121.15}{18} \times \left(.75 - \frac{.50}{2} \right) = - 1.68"$
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 = 18.68 Summer freeboard = .40 Moulded draught (d) = 18.28 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.57 = 4 1/2" Addition for Winter North Atlantic Freeboard (if required) = 6 1/2"	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ 4881 Tons per inch immersion at summer load water line $T =$ 24.97 Deduction = $\frac{\Delta}{40 T}$ inches = 4.89 = 5"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.727 + .68}{1.36} = \frac{1.407}{1.36}$ Depth Correction11 Deduction for superstructures 33.73 Sheer correction 1.68 Round of Beam correction02 Correction for Thickness of Deck amidships - Other corrections, scantlings, etc. - Summer Freeboard = 4754.77"
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~W~~ Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc 7 3/4"	Tropical Fresh Water Freeboard 0' - 4 3/4"
Fresh Water Line " 5"	Fresh Water " 0' - 3"
Tropical Line " 2 3/4" (LIMITED)	Tropical " 0' - 2" (limited)
Winter Line below " 4 1/2"	Winter " 0' - 3 1/4"
Winter North Atlantic Line " 6 1/2"	Winter North Atlantic " 0' - 11 1/4"

Summer freeboard as previously assigned by G. 14.10. **14.10.**