

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 37408
(For London Office only).

8 OCT 1943

Ship's Name "CHATTEHDEEN" YARD No 311	Official Number ✓ 169754	Nationality and Port of Registry BRITISH London	Gross Tonnage 325. 322	Date of Build 1943	Port of Survey IPSWICH.
Moulded Dimensions: Length 130'-0" Breadth 24'-6" Depth 9'-8" <i>130.35 to centre of rudder stock.</i>					Date of Survey
Moulded displacement at moulded draught = 85 per cent. of moulded depth 540 tons					Surveyor's Signature <i>K. Bell</i>
Coefficient of fineness for use with Tables .72					Particulars of Classification +100 A.1.

Depth for Freeboard (D). Moulded depth 9'-8" Stringer plate 38" 03" Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓ Depth for Freeboard (D) = <u>9.70</u>	Depth correction. (a) Where D is greater than Table depth (D-Table depth) R = $(9.70 - 8.69) \times 1.003 = +1.01$ (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) 24.5' Standard Round of Beam = $\frac{B \times 12}{50} = 5.88$ Ship's Round of Beam = 7" Difference 1.12 Restricted to - Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.12}{4} \times .6064 = -.17$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equivalent</i>	36.97	36.97	7-0	-	36.97
" overhang ...					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
F'cle enclosed <i>equivalent</i>	14.34	14.34	7-0	-	14.34
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	51.31	51.31			51.31

Standard Height of Superstructure	6.0'
" " R.Q.D.	-
Deduction for complete superstructure	19.03
Percentage covered $\frac{S}{L} =$	39.36
" " $\frac{S_1}{L} =$	
" " $\frac{E}{L} =$	
Percentage from Table, Line A.	22.95
(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 =	19.03 × .2295 = -4.37

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	23.04	1		23.04	24½	24.5	1		24.5
¼L from A.P. ...	10.25	4		41.00	10	10.0	4		40.0
¾L " ...	2.53	2		5.06	2	2.0	2		4.0
Amidships ...	-	4		-	-	-	4		-
¾L from F.P. ...	5.07	2		10.14	5	5.0	2		10.0
¼L " ...	20.50	4		82.00	22	22.0	4		88.0
F.P. ...	46.07	1		46.07	50	50.0	1		50.0
Total				207.31					216.5

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{9.19}{18} \left(\frac{.75 - .1968}{.5532} \right) = -.28$
 If limited on account of midship superstructure. *yes. Nil.*

Mean actual sheer aft = 7.75
 Mean standard sheer aft

Mean actual sheer forward = *sum*
 Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *1.2*
 " " aft of " =

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

Depth to Freeboard Deck = 9.70
 Summer freeboard = .83
 Moulded draught (d) = 8.87

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2.22 = 2¼"

Addition for Winter North Atlantic Freeboard (if required) = 4¼"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ = 592-590.

Tons per inch immersion at summer load water line

T = 6.6

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

= 2.24

= 2¼"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.72 + .68}{1.36} = 1.40 / 1.36$

	+	-
Depth Correction	1.01	-
Deduction for superstructures	-	4.37
Sheer correction	-	-
Round of Beam correction	-	.17
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	1.01	4.54

Summer Freeboard = 9.89

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

Tropical Fresh Water Line above Centre of Disc ... 4½"
 Fresh Water Line " " ... 2¼"
 Tropical Line " " ... 2¼"
 Winter Line below " " ... 2¼"
 Winter North Atlantic Line " " ... 4¼"

Tropical Fresh Water Freeboard ... 0'-5½"
 Fresh Water " " ... 0'-7¾"
 Tropical " " ... 0'-7¾"
 Winter " " ... 1'-0¼"
 Winter North Atlantic " " ... 1'-2¼"

