

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name BURNSIDE	Official Number 165988	Nationality and Port of Registry British, Glasgow.	Gross Tonnage	Date of Build 1940	Port of Survey
Moulded Dimensions: Length 420.58 Breadth 57.0' Depth 38'-6 7/8" <i>to centre of keel at midship</i>					Date of Survey 18.12.41
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature
Coefficient of fineness for use with Tables 772 (Estimated)					Particulars of Classification + 100 AT with freeboard.

Depth for Freeboard (D).		Depth correction.	Round of Beam correction.
Moulded depth ...	38.57	(a) Where D is greater than Table depth (D - Table depth) R = (38.62 - 28.04) 3 = + 31.74"	Moulded Breadth (B) 57.0
Stringer plate58	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$ 13.68
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	✓		Ship's Round of Beam = 14.00
Depth for Freeboard (D) = 38.62		If restricted by superstructures ✓	Difference .32
			Restricted to
			Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S}{L} \right) = \frac{.32}{4} \times .8035 = -.06"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
... overhang ...					
R.Q.D. enclosed ...	✓				
... overhang ...					
Bridge enclosed ...					
... overhang aft ...					
... overhang forward ...					
Fore enclosed ...	82.64	82.64	4.0'	4/5	44.07
... overhang ...					
Trunk aft ...					
... forward ...					
Tonnage opening aft ...					
... forward ...					
Total ...	82.64	82.64			44.07

Standard Height of Superstructure **7.5**
" " R.Q.D. **✓**
Deduction for complete superstructure **42.00"**
Percentage covered $\frac{S}{L} =$ **19.65**
" " $\frac{S_i}{L} =$ **19.65**
" " $\frac{E}{L} =$ **10.48**
Percentage from Table, Line A. **5.24**
(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 = **42.00 x .0524 = -2.20"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.06	1		52.06	45.63	45.63	1		45.63
1/4 L from A.P. ...	23.17	4		92.68	19.12	19.12	4		76.48
1/2 L " ...	5.73	2		11.46	5.88	5.88	2		11.76
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	11.45	2		22.90	10.81	10.81	2		21.62
1/4 L " ...	46.33	4		185.32	90.56	90.56	4		362.24
F.P. ...	104.12	1		104.12	142.25	142.25	1		142.25
Total ...				468.54					659.98

Mean actual sheer aft = **DEFICIENT > 75%**
Mean standard sheer aft
Mean actual sheer forward = **EXCESS.**
Mean standard sheer forward
Length of enclosed superstructure forward of amidships = } **NIL**
" " aft of " = }
SHEER AFT.
52.06 1 52.06 45.63 1 45.63
23.17 3 69.51 19.12 3 57.36
5.73 3 17.19 5.88 3 17.64
138.76 120.63 138.76
120.63 138.76
Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{191.44 - (.75 \times .0482)}{18} = \frac{191.44 - .03615}{18} = \frac{191.40385}{18} = 10.6335$
If limited on account of midship superstructure. **YES. NIL**
If limited to maximum allowance of 1 1/2 ins. per 100 ft. -

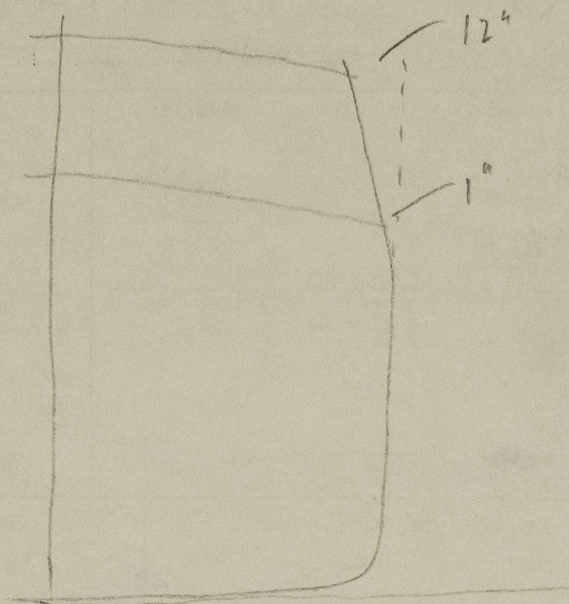
Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	77.98
Depth to Freeboard Deck = 38.62	Δ =	772 + 68 1.36	83.26
Summer freeboard = 12.23	Tons per inch immersion at summer load water line	Depth Correction ...	31.74
Moulded draught (d) = 26.39	T =	Deduction for superstructures ...	- 2.20
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.60 = 6 1/2"	Deduction = $\frac{\Delta}{40T}$ inches = 7"	Sheer correction ...	-
Addition for Winter North Atlantic Freeboard (if required) =		Round of Beam correction ...	- .06
		Correction for Thickness of Deck amidships ...	-
		Other corrections, scantlings, etc. TA. CORRESPOND.	34.01
		WITH A SUMMER MOULDED DRAUGHT OF 26 - 4 3/4"	65.75
		Summer Freeboard = 146.75	+ 63.49

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

Tropical Fresh Water Line above Centre of Disc	13 1/2"
Fresh Water Line	7"
Tropical Line	6 1/2"
Winter Line below	6 1/2"
Winter North Atlantic Line	✓

Tropical Fresh Water Freeboard	11' - 2 3/4"
Fresh Water	11' - 1 1/4"
Tropical	11' - 7 3/4"
Winter	11' - 8 1/4"
Winter North Atlantic	✓

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.



Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....



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Foundation