

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name FREEMAN HATCH	Official Number 168494	Nationality and Port of Registry BRITISH LONDON	Gross Tonnage 1793	Date of Build 1943	Port of Survey _____
Moulded Dimensions: Length 250'-0" Breadth 42'-1" Depth 20'-5"					Date of Survey 18.3.48
Moulded displacement at moulded draught = 85 per cent. of moulded depth 3870 tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables .742					Particulars of Classification 100A1 Class Contemplated.

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 20.42	(a) Where D is greater than Table depth (D-Table depth) R = (20.48-16.67)1.923 = +7.33"	Moulded Breadth (B) 42.08
Stringer plate06	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} = 10.10$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 10.125
Depth for Freeboard (D) = 20.48		Difference .025
		Restricted to _____
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.025 \times 54.2}{4} = .14$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)	
Poop enclosed	21.70	21.70	7.5	✓	21.70	Standard Height of Superstructure 6.00
" overhang						" " R.Q.D. ✓
R.Q.D. enclosed						Deduction for complete superstructure 31.00
" overhang						Percentage covered $\frac{S}{L} = 47.05$
Bridge enclosed <i>Equivalent</i>	63.76	63.76	8.0	✓	63.76	" " $\frac{S_i}{L} =$
" overhang aft	3.66	2.75			2.75	E = } 45.98
" overhang forward	2.71	1.35			1.35	L =
P'cle enclosed <i>Open</i>	25.80	25.40	7.0	✓	25.40	" " $\frac{E}{L} =$
" overhang						Percentage from Table, Line A. <i>TIMBER.</i> 66.74
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Percentage from Table, Line B. ✓
Tonnage opening aft						(corrected for absence of forecastle (if required))
" " forward						Interpolation for bridge less than .2L (if required) ✓
Total	117.63	114.96			114.96	Deduction = 31.00 × .6674 = -20.69"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	35.00	1	35.00	36.0	54.0	1	54.0		
$\frac{1}{8}L$ from A.P.	15.575	4	62.30	16.0	16.0	4	64.0		
$\frac{2}{8}L$ "	3.85	2	7.70	4.0	4.0	2	8.0		
Amidships	-	4	-	-	-	4	-		
$\frac{2}{8}L$ from F.P.	7.70	2	15.40	8.0	8.0	2	16.0		
$\frac{1}{8}L$ "	31.15	4	124.60	32.0	32.0	4	128.0		
F.P.	70.00	1	70.00	71.0	71.0	1	71.0		
Total			315.00				341.00		

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{26.00}{18} = 1.44$ (if limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **✓**)

If limited on account of midship superstructure. $\frac{1.44}{2} \times 74 = -.74$

Mean actual sheer aft = **Excess.**
Mean standard sheer aft = **Excess.**

Mean actual sheer forward = **Excess.**
Mean standard sheer forward = **Excess.**

Length of enclosed superstructure forward of amidships = **.0988L**
aft of " = **.71L**

Actual height of Poop = **7.50'**
Standard " " = **6.00'**
Excess = **1.50'**

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 $\frac{.742 \times 1.68}{1.36} = 1.422$
Depth to Freeboard Deck = 20.48	$\Delta =$	Depth Correction 7.33
Summer freeboard = 1.63	Tons per inch immersion at summer load water line	Deduction for superstructures 20.69
Moulded draught (d) = 18.85	T =	Sheer correction74
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.71 = 4$\frac{3}{4}$"	Deduction = $\frac{\Delta}{40 T}$ inches = 4$\frac{3}{4}$"	Round of Beam correction -
Addition for Winter North Atlantic Freeboard (if required) = $\frac{2}{3} = 6.28 = 6\frac{1}{4}"$		Correction for Thickness of Deck amidships -
		Other corrections, scantlings, etc. -
		7.33 21.43 -14.10
		Summer Freeboard = 19.67

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

Tropical Fresh Water Line above Centre of Disc	20$\frac{1}{4}$"	Tropical Fresh Water Freeboard	0$\frac{1}{2}$"
Fresh Water Line	15$\frac{1}{2}$"	Fresh Water	1$\frac{1}{2}$"
Tropical Line	15$\frac{1}{2}$"	Tropical	1$\frac{1}{2}$"
Winter Line	4$\frac{1}{2}$"	Winter	2$\frac{1}{4}$"
Winter North Atlantic Line	6$\frac{1}{2}$"	Winter North Atlantic	3$\frac{1}{4}$"
SUMMER LINE ABOVE	10$\frac{3}{4}$"		