

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **S.S. "FREEMAN HATCH"** Official Number **168494** Nationality and Port of Registry **BRITISH LONDON** Gross Tonnage **1793** Date of Build **1943**

Port of Survey **NEWCASTLE-ON-TYNE**

Date of Survey **MARCH 1948**

Surveyor's Signature **W.T. Burns.**

Particulars of Classification **100A1**
CLASS CONTEMPLATED.

Moulded Dimensions: Length **250'-0"** Breadth **42'-1"** Depth **20'-5"**
To Centre of Rudder/Block.

Moulded displacement at moulded draught = 85 per cent. of moulded depth **3870** tons

Coefficient of fineness for use with Tables **.742**

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 =		Moulded Breadth (B)	42.08'
Stringer plate	.06'	(20.48 - 16.67) 1.923 = +7.33		Standard Round of Beam = $\frac{B \times 12}{50}$	10.10
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	10.125
$T \left(\frac{L-S}{L} \right) =$				Difference	.025
Depth for Freeboard (D) =	20.48'	If restricted by superstructures	✓	Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{.025}{4} \times .5402 = \text{Nil.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	21.70	21.70	7.5	✓	21.70
" overhang					
R.Q.D. enclosed					
" overhang	63.76	63.76	8.0	✓	63.76
Bridge enclosed	63.0	63.76			2.75
" overhang aft	SEE 3-66	2.75			1.35
" overhang forward	SKETCH	1.35			25.40
F'cle enclosed	25.40	25.40	7.0	✓	
" overhang	25.80				
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total	117.63	114.96			114.96

Standard Height of Superstructure **6.00'**

" " R.Q.D. **✓**

Deduction for complete superstructure **31.00**

Percentage covered $\frac{S}{L} = 47.05$

" " $\frac{S_1}{L} = 45.98$

Percentage from Table, Line A. **✓**
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **32.58**
(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required) **✓**

Deduction = $31.00 \times .3258 = 10.10$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	35.00	1		35.00	36"	54.0	1		54.0
1/2 L from A.P.	15.575	4		62.30	16"	16.0	4		64.0
1/2 L	3.85	2		7.70	4"	4.0	2		8.0
Amidships	-	4		-	0		4		
1/2 L from F.P.	7.70	2		15.40	8"	8.0	2		16.0
1/2 L	31.15	4		124.60	32"	32.0	4		128.0
F.P.	70.00	1		70.00	71"	71.0	1		71.0
Total				315.00					344.0

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{26.00}{18} \left(\frac{.75 - .2352}{2} \right) = -.74"$

If limited on account of midship superstructure. $\frac{15}{20} \times .74 = -.74"$

Mean actual sheer aft = **Excess.**
Mean standard sheer aft = **18"**

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

Length of enclosed superstructure forward of amidships = $0.0998L$

" " aft of " = $> .1L$

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Ft.
Depth to Freeboard Deck = **20.48**
Summer freeboard = **2.52**
Moulded draught (d) = **17.96**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = $4.49" = 4\frac{1}{2}"$

Addition for Winter North Atlantic Freeboard (if required) = **6 1/2"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 4030$

Tons per inch immersion at summer load water line

$T = 20.89$

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

$= 4.82"$

$= 4\frac{3}{4}"$

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.

+

-

7.33

10.10

74

-

-

-

7.33

10.84

- 3.51

Summer Freeboard = **30.26**

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

Tropical Fresh Water Line above Centre of Disc	9 1/4"
Fresh Water Line	4 3/4"
Tropical Line	4 1/2"
Winter Line below	4 1/2"
Winter North Atlantic Line	6 1/2"

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

Freeman Hatch.

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.

MLD.W.L.	MLD Δ	EXT Δ	T.P. 1"
17'-0"	3780	3800	20.75
18'-0"	4040	4060	20.90
19'-0"	4290	4315	21.00

Bridge :- Enclosed length = 63'-0"

$$\frac{2 \times 4.42 \times 3.46}{40.17} = \frac{.76}{63.76}$$

$$\text{Overhang Aft} = 4.42$$

$$\frac{.76}{3.66}$$

$$\text{Overhang Forward} = 2.71$$

$$\text{Lancaster (open)} = 25.80$$

$$\begin{aligned} & \text{S}_1 \\ & \frac{4}{10} = 25.00 \\ & .80 \times .60 = \frac{.40}{25.40 = \text{S}_1.} \end{aligned}$$

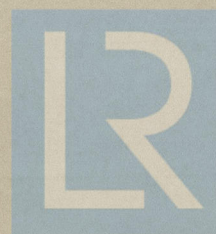
Trade of ship INTERNATIONAL

Names of sister ships

Builder's name and yard number LEATHAM SMITH SHIPBUILDING CO. WISCONSIN, U.S.A. YARD NO 271

Owners MINISTRY OF TRANSPORT [WM CORY & SON LD. MANAGERS]

Fee £ INCLUSIVE FEE.



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Foundation