

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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

Ship's Name BRITISH MARINER	Official Number 182898	Nationality and Port of Registry BRITISH. LONDON.	Gross Tonnage 8575.84	Date of Build 1948	Port of Survey GLASGOW.
To CR. OF RUDDER STOCK Moulded Dimensions: Length 464.00' Breadth 61.50' Depth 34.00'					Date of Survey WHILST BUILDING.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18345 tons					Surveyor's Signature <i>Whaemillan</i>
Coefficient of fineness for use with Tables .779					Particulars of Classification + 100 A.I. CARRYING PETROLEUM IN BULK (CONTEMPLATED)

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 34.00'	(a) Where D is greater than Table depth (D-Table depth) R = (34.06 - 30.93) 3 = + 9.39"	Moulded Breadth (B) = 61.50'
Stringer plate72"06	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 3.13	Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{14.76}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \mathbf{NIL.}$	If restricted by superstructures ✓	Ship's Round of Beam = 14.75"
Depth for Freeboard (D) = 34.06'		Difference = -0.01
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.01}{4} \times .5878 = \mathbf{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed EQUIV...	97.83	97.83	8.00'	✓	97.83	Standard Height of Superstructure 7.5'
" overhang ...	1.17	.58			1.17	" " R.Q.D. ✓
R.Q.D. enclosed ...						Deduction for complete superstructure 42"
" overhang ...						Percentage covered $\frac{S}{L} = \mathbf{41.59}$
Bridge enclosed EQUIV...	42.50	42.50	8.00'	✓	42.50	" " $\frac{S_1}{L} = \mathbf{41.22}$
" overhang aft ...	3.50	2.63			2.63	" " $\frac{E}{L} =$
" overhang forward50	.25			.25	Percentage from Table, Line A. Tanker 32.22
F'cle enclosed EQUIV...	47.48	47.48	8.00'	✓	47.48	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B. ✓
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than .2L (if required) ✓
Tonnage opening aft ...						Deduction = 42 x .3222 = -13.53"
" " forward ...						
Total ...	192.98	191.27			191.27	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate SEE OVER	Effective Ordinate	S M	Product
A.P. ...	56.40	1	56.40	59.00"	56.40	1	56.40
$\frac{1}{2}$ L from A.P. ...	25.10	4	100.40	25.25"	25.10	4	100.40
$\frac{3}{8}$ L " ...	6.205	2	12.41	6.38"	6.205	2	12.41
Amidships ...	-	4	-	-	-	4	-
$\frac{3}{8}$ L from F.P. ...	12.41	2	24.82	11.75"	11.75	2	23.50
$\frac{1}{2}$ L " ...	50.20	4	200.80	49.13"	49.13	4	196.52
F.P. ...	112.80	1	112.80	114.00"	114.00	1	114.00
Total ...			507.63				503.23

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{4.40}{18} (.75 - .2079) = \mathbf{+.13"}$

If limited on account of midship superstructure.

Mean actual sheer aft = **Excess**
Mean standard sheer aft =Mean actual sheer forward = **deficient**
Mean standard sheer forward =Length of enclosed superstructure forward of amidships = **Tanker**
" " aft of " =

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	SEE OVER Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = \mathbf{17355}$ Tons per inch immersion at summer load water line $T = \mathbf{58.69}$ Deduction = $\frac{\Delta}{40 T}$ inches $= \mathbf{7.39}$ $= \mathbf{7\frac{1}{2}"}$	TABULAR FREEBOARD corrected for Fresh Water (if required) Correction for coefficient $\frac{.779 + .68}{1.36} = \mathbf{1.459/1.36}$	78.70 84.43
Depth to Freeboard Deck = 34.06 Summer freeboard = 6.71 Moulded draught (d) = 27.35		Depth Correction ... 9.39 Deduction for superstructures ... 13.53 Sheer correction13 Round of Beam correction ... - Correction for Thickness of Deck amidships ... - Other corrections, scantlings, etc. ... -	42 10.12.48 -4.01
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.84 = 6$\frac{3}{4}$" Addition for Winter North Atlantic Freeboard (if required) = 6.84 + 4.64 = 11.48 = 11$\frac{1}{2}$"		Summer Freeboard = 80.42	

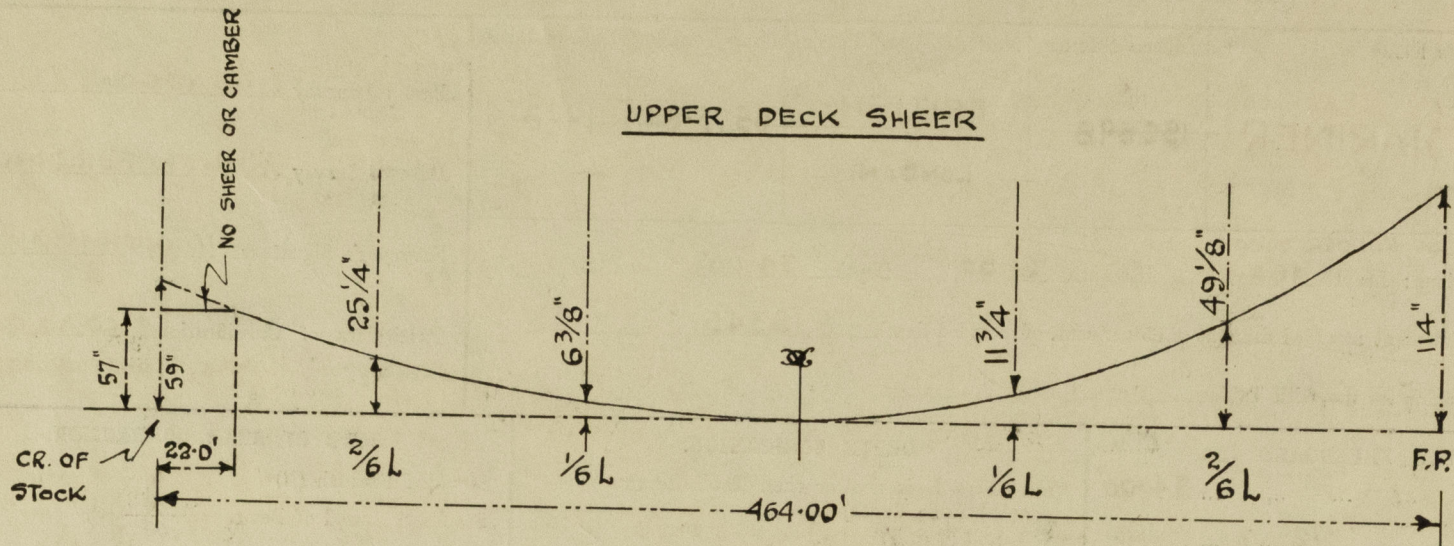
SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	... 14$\frac{1}{4}$"
Fresh Water Line " "	... 7$\frac{1}{2}$"
Tropical Line " "	... 6$\frac{3}{4}$"
Winter Line below " "	... 6$\frac{3}{4}$"
Winter North Atlantic Line " "	... 11$\frac{1}{2}$"

Tropical Fresh Water Freeboard	6$\frac{1}{2}$"
Fresh Water " "	5$\frac{1}{2}$"
Tropical " "	6$\frac{1}{2}$"
Winter " "	7$\frac{1}{2}$"
Winter North Atlantic " "	7$\frac{1}{2}$"

BRITISH MARINER

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.



Pooh at side = 94.50'

$$\frac{2}{3} \times 5 = \underline{3.33}$$

$$E_{\text{quin}} = \underline{\underline{97.83}}$$

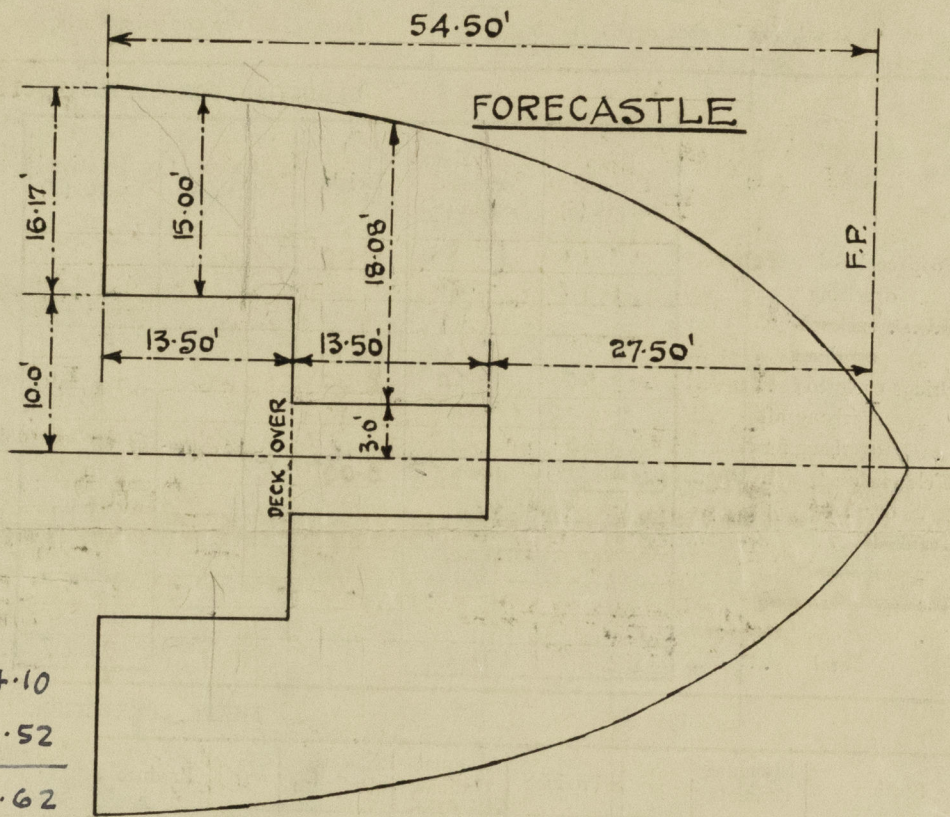
Pook o'hang = $99 - 97.83 = \underline{\underline{1.17'}}$

Bridge at side = 39.50

$$\frac{2}{3} \times 4.5 = \underline{3.00}$$

$$L_{\text{equiv}} = \underline{\underline{42.50'}}$$

Bridge s'hang = $43 - 42.50 = .50'$



Forecastle:-

Forward of $\frac{4}{10} = 13.5 \times 18.08 = 244.10$

$$5.4 \times 13.80 = 74.52$$

318.62

$$\frac{318.62}{21.08} = 15.12$$

27.50

4 quins enclosed
to 4/10 = 42.62

42.62

length to deck over = 41.0' \therefore no change

$$\text{act of } 4/10 = 8.10 \times 15.00 = 121.50$$

$$\frac{121.50}{25} = 4.86$$

42.62

47.48' = equiv enclosed length.

<u>EXT. DRAUGHT</u>	<u>Displ.^T S.W.</u>	<u>T.P. 1"</u>
28'-0"-----	17.757 TONS.....	58-88
27'-0"-----	17.052 "-----	58-55

KEEL ALLOWANCE 1"

FREEBOARD SURVEY REQUEST FORM ATTACHED

Trade of ship INTERNATIONAL.

Names of sister ships **"BRITISH RANGER"**

Builder's name and yard number.....**HARLAND & WOLFF, LD. GLASGOW. YARD N° 1378 G.**

Owners **BRITISH TANKER CO. LD.**

Fee £ 34 . 0 . 0

MLD