

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name BRITISH ENDEAVOUR	Official Number 182929	Nationality and Port of Registry British London.	Gross Tonnage 8589	Date of Build 1948	Port of Survey
Moulded Dimensions: Length 463.21' Breadth 61.75' Depth 34.08 <i>to centre of madden stork</i>					Date of Survey 13.1.49
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18170 tons					Surveyor's Signature d.
Coefficient of fineness for use with Tables .768					Particulars of Classification +100A1. Carrying Petroleum in Bulk.

DEPTH FOR FREEBOARD (D).

Moulded depth ... **34.08**

Stringer plate ... **.06**

Sheathing on exposed deck

$T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) = **34.14**

DEPTH CORRECTION.

(a) Where D is greater than Table depth
(D-Table depth) R = **(34.14-30.88)3 = +9.78"**

(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) **61.75**

Standard Round of Beam = $\frac{B \times 12}{50} =$ **14.82**

Ship's Round of Beam = **15.50**

Difference **+ .68**

Restricted to

Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{.68}{4} \times .583 = -.10$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Equiv.</i> ...	96.55	96.55	8.0	✓	96.55
" overhang ...	1.33	.67			.67
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed <i>Equiv.</i> ...	42.67	42.67	8.0	✓	42.67
" overhang aft ...	3.50	2.63			2.63
" overhang forward ...	0.83	.42			.42
Fore enclosed <i>Equiv.</i> ...	50.18	50.14	8.0	✓	50.14
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	195.06	193.08			193.08

Standard Height of Superstructure **7.50**

" " R.Q.D. **✓**

Deduction for complete superstructure **42.00**

Percentage covered $\frac{S}{L} =$ **42.11**

" " $\frac{S_1}{L} =$ **41.69**

" " $\frac{E}{L} =$ **41.69**

Percentage from Table, Line A. *Tanker* **32.69**

(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 × .3269 = 13.73"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	56.32	1		56.32	62.00	56.32	1		56.32
$\frac{1}{2}$ L from A.P. ...	25.06	4		100.24	24.08	25.06	4		100.24
$\frac{1}{4}$ L " ...	6.195	2		12.39	6.20	6.195	2		12.39
Amidships ...		4					4		
$\frac{1}{2}$ L from F.P. ...	12.39	2		24.78	12.30	12.30	2		24.60
$\frac{1}{4}$ L " ...	50.12	4		200.48	49.30	49.30	4		197.20
F.P. ...	112.64	1		112.64	111.25	111.25	1		111.25
Total ...				506.85					502.00

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**

Sheers forward. "Std. aft of Act. "

112.64	1	112.64	111.25	1	111.25
50.12	3	150.36	49.30	3	147.90
12.39	3	37.17	12.30	3	36.90
		300.17			296.05

$\frac{296.05}{300.17} = .986$

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{4.85}{18} (.75 - .2105) = +0.15"$

If limited on account of midship superstructure. **✓**

If limited to maximum allowance of 1½ ins. per 100 ft. **✓**

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

Depth to Freeboard Deck = **34.14**

Summer freeboard = **6.65**

Moulded draught (d) = **27.49**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **6.87 = 6 $\frac{3}{4}$ "**

Addition for Winter North Atlantic Freeboard (if required) = **6.87 + 4.63 = 11.50 = 11 $\frac{1}{2}$ "**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ **17326**

Tons per inch immersion at summer load water line

T = **58.43**

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

= **7.41**

= **7 $\frac{1}{2}$ "**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.768 + .68}{1.36} = \frac{1.448}{1.36}$

Depth Correction ... **9.78**

Deduction for superstructures ... **13.73**

Sheer correction ... **.15**

Round of Beam correction ... **.10**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

9.93 13.83 3.90

Summer Freeboard = **79.68**

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

Tropical Fresh Water Line above Centre of Disc ...	14$\frac{1}{2}$"
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 ...	5' - 5$\frac{1}{2}$"
Fresh Water " " ...	6' - 0$\frac{1}{2}$"
Tropical " " ...	6' - 1$\frac{1}{2}$"
Winter " " ...	7' - 2$\frac{1}{2}$"
Winter North Atlantic " " ...	7' - 7$\frac{1}{4}$"

British Endeavour.

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.

Poap.

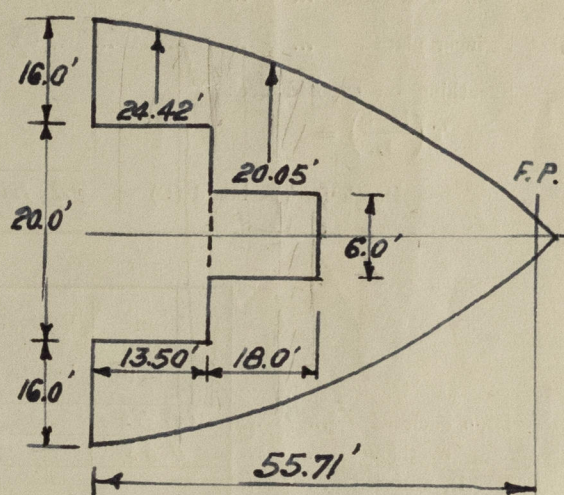
$$\begin{aligned} \text{Length at side} &= 93.375' \\ \frac{2}{3} \times 4.75 &= \frac{3.170'}{96.545'} \\ \text{Equiv. O'hang} &= 4.50 - 3.17 \\ &= 1.33' \end{aligned}$$

Bridge

$$\begin{aligned} \text{Length at side} &= 40.00' \\ \frac{2}{3} \times 4.00 &= \frac{2.67'}{42.67'} \\ \text{Ford O'hang} &= 3.50 - 2.67 \\ &= 0.83' \end{aligned}$$

Forecastle.

$$\begin{aligned} \text{Length ford of passage} &= 24.21' \\ \text{Length at side of passage} &= \frac{18.00 \times 17.05}{20.05} = 15.31' \\ \text{Passage } (18.00 - 15.31) \times .986 &= 2.65 \\ \text{Sidehouses } \frac{13.50 \times 14.42}{24.42} &= 7.97' \\ \text{Equiv. enclosed length} &= 50.14' \\ \text{Equiv. covered length} &= 24.21' \\ &18.00 \\ &7.97 \\ &\hline &50.18' \end{aligned}$$



Trade of ship

Names of sister ships

Builder's name and yard number

Owners

Fee £



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Foundation