

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **BRITISH ENDEAVOUR.** Official Number **BRITISH LONDON.** Gross Tonnage **1948.** Date of Build **1948.** Port of Survey **11.1.49.**

Moulded Dimensions: Length **463.46** / Breadth **61.75** / Depth **34.08** /  
*To centre of Rudder Stock.*

Moulded displacement at moulded draught = 85 per cent. of moulded depth **18170** / tons

Coefficient of fineness for use with Tables **767.** /

Surveyor's Signature **[Signature]**

Particulars of Classification **+100 A1**  
*(Contemplated) Carrying Petroleum in bulk.*

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... <b>34.08</b>	(a) Where D is greater than Table depth (D-Table depth) R = <b>(34.14 - 30.89) 3 = +9.75</b> /	Moulded Breadth (B) <b>61.75</b>
Stringer plate ... <b>72"</b> ... <b>06</b>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <b>✓</b>	Standard Round of Beam = $\frac{B \times 12}{50} = 14.82$
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$	If restricted by superstructures <b>✓</b>	Ship's Round of Beam = <b>15.50</b>
Depth for Freeboard (D) = <b>34.14</b>		Difference <b>.68</b>
		Restricted to
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.68}{4} \times .5829 = -.10$

### DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>Equival</i> ...	96.79	96.79	8.0	✓	96.79
" overhang ...	1.33	.67			.67
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed <i>Equival</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>Equival</i> ...	50.18	50.14	8.0	✓	50.14
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	195.30	193.32			193.32

Standard Height of Superstructure **7.50**

" " R.Q.D. **✓**

Deduction for complete superstructure **42.00.**

Percentage covered  $\frac{S}{L} = 42.14$  /

" "  $\frac{S_1}{L} =$  } **41.71** /

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

Percentage from Table, Line A. *Tanker* **32.71**  
 (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 .3271 = 13.74.** ✓

### SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	56.35	1		56.35	62.00	56.35	1		56.35
$\frac{1}{2}$ L from A.P. ...	25.076	4		100.30	24.80	25.075	4		100.30
$\frac{3}{4}$ L " ...	6.198	2		12.39	6.20	6.198	2		12.39
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{4}$ L from F.P. ...	12.39	2		24.78	12.30	12.30	2		24.60
$\frac{1}{2}$ L " ...	50.15	4		200.60	49.30	49.30	4		197.20
F.P. ...	112.69	1		112.69	111.25	111.25	1		111.25
Total ...				507.11					502.09

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{5.02}{18} (.75 - .2107) = +0.15$  ✓

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.**

L

aft of " =

*sheer forward.*

$\frac{112.69}{18} = 6.26$  ✓

$\frac{111.25}{18} = 6.18$  ✓

$\frac{50.15}{18} = 2.78$  ✓

$\frac{200.60}{18} = 11.14$  ✓

$\frac{100.30}{18} = 5.57$  ✓

$\frac{12.39}{18} = .69$  ✓

$\frac{24.78}{18} = 1.38$  ✓

$\frac{56.35}{18} = 3.13$  ✓

$\frac{296.05}{300.31} = .986$  ✓

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** Ft.

Summer freeboard = **6.65**

Moulded draught (d) = **27.49**

### Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = **6.87 = 6¾** ✓

### Addition for Winter North Atlantic Freeboard (if required) = 6.87 + 4.63 = 11.50 = 11½

### 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"**

= **7½"**

### 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.

+	-
9.75	
- 13.74	
.15	
- .10	
-	
9.90	13.84
	- 3.94
	Summer Freeboard = 79.66

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

Tropical Fresh Water Line above Centre of Disc ... **14¼"**

Fresh Water Line " " ... **7½"**

Tropical Line " " ... **6¾"**

Winter Line below " " ... **6¾"**

Winter North Atlantic Line " " ... **11½"**

Tropical Fresh Water Freeboard ... **6' 7¾"**

Fresh Water " " ... **5' 5½"**

Tropical " " ... **6' 0¼"**

Winter " " ... **6' 1"**

Winter " " ... **7' 2½"**

Winter North Atlantic " " ... **7' 7¼"**



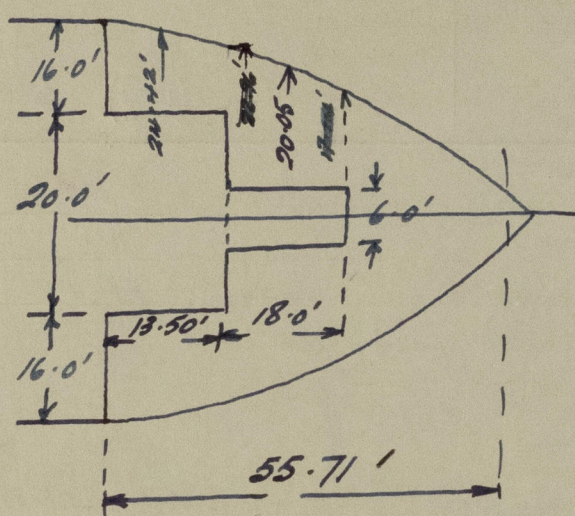
Pop :- Length at side = 93.625 / 99.375  
 $\frac{2}{3} \times 4.75 = 3.17$  /  
96.795

Equivalt O'hang =  $4.50 - 3.17$  /  
=  $1.33$  /

Bridge :- Length at side = 40.00'

$\frac{2}{3} \times 4.0 = \frac{2.67}{42.67}$

$\text{Lord. Okang} = 3.50 - 2.67$   
 $= 0.83'$



Lancaster :-

$$\text{Length forward of passage} = 24.21'$$

$$\left. \begin{array}{l} \text{Length at side} \\ \text{of passage} \end{array} \right\} = \frac{18.00 \times 17.05}{20.05} = 15.31'$$

$$\text{Passage} = \frac{(18.00 - 15.31) \times .986}{2.69} = 2.65'$$

$$\text{Sedehours} = \frac{13.50 \times 24.42}{24.42} = 7.97'$$

$$\text{Equivalent incl. length} = \frac{24.42}{7.97} = 50.14'$$

Equivalent Covered length =  $24.21' + 18.00' + 7.97' = 50.18'$

Trade of ship .....

Names of sister ships

Fee £.....