

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **EMPIRE TIQOMBO**
ex "HOWACHT"

Official Number **180759**

Nationality and Port of Registry **London**

Gross Tonnage **602.91**

Date of Build **1943.**

Port of Survey **FLensburg.**

Dates of Survey **10th, 17th & 22nd August, 1945.**

Surveyor's Signature *J.E. Fitchard*

Particulars of Classification **+100/4 K(E)**

Moulded Dimensions: Length **176'-4"** Breadth **29'-6"** Depth **17'-11.21"**
176.33 **29.50** **17.08**

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

Coefficient of fineness for use with Tables **.756** *assumed*

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	17'-11.21"	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	29'-53"
Stringer plate	.04'	(14.12 - 11.75) × 1.356 = + 3.21		Standard Round of Beam = $\frac{B \times 12}{50}$	7.09
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	7.0
T $\left(\frac{L-S}{L}\right)$ =	.25			Difference	.09
Depth for Freeboard (D) =	14'-11.21"	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S}{L}\right)$	$\frac{.09}{4} \times .3595 = .01$

DEDUCTION FOR SUPERSTRUCTURES.					
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
AFTER BRIDGE					
Peep enclosed	41.0'	41.00	7.22'		41.00
overhang FORWARD	1.50	.75			.75
R.Q.D. enclosed	22.96'	22.96	2.50'	2.509	16.36
overhang					
Bridge enclosed	18.04'	18.04	7.22'		18.04
overhang aft	3.00	2.25			2.25
overhang forward	1.50	.75			.75
F'cle enclosed	27.2'	27.20	7.48'		27.20
overhang					
Trunk aft					
forward					
Tonnage opening aft					
forward	115.20				
Total	109.20	112.95			106.35

Standard Height of Superstructure **6'-0"**

" " R.Q.D. **3.509'**

Deduction for complete superstructure **28.63**

Percentage covered $\frac{S}{L} = 65.32$

" " $\frac{S_1}{L} = 64.05$

" " $\frac{E}{L} = 60.30$

Percentage from Table, Line A **TANKER 52.33**

(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 = **28.63 × 52.33 = - 12.37**

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P.	27.63	1		27.63	28.17	28.17	1
1/8 L from A.P.	12.30	4		49.20	16.53	16.53	4
3/8 L	3.04	2		6.08	3.94	3.94	2
Amidships	-	4		-	-	-	4
5/8 L from F.P.	6.08	2		12.16	10.82	10.82	2
7/8 L	24.59	4		98.36	30.17	30.17	4
F.P.	55.26	1		55.26	56.37	56.37	1
Total				248.69			

Mean actual sheer aft = **28.17**

Mean standard sheer aft = **28.17**

Mean actual sheer forward = **3.94**

Mean standard sheer forward = **3.94**

Length of enclosed superstructure forward of amidships = **12.16**

" " aft of " = **12.16**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{48.64 - 52.17}{18} \left(.75 - \frac{.15}{2 \times 176} \right) = + 1.25$

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

If limited to maximum allowance of 1 1/2 ins. per 100 ft. **No.**

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	
Depth to Freeboard Deck =	14'-11.21"	Δ =		Depth Correction	3.21
Summer freeboard =	1.75	Tons per inch immersion at summer load water line		Deduction for superstructures	12.37
Moulded draught (d) =	13'-2.21"	T =		Sheer correction	1.15
Deduction for Tropical freeboard and Addition for		Deduction = $\frac{\Delta}{40 T}$ inches		Round of Beam correction	-
Winter freeboard = $\frac{d}{4}$ inches =	3'-2.21" = 3 3/4"	=	3 3/4"	Correction for Thickness of Deck amidships	-
Addition for Winter North Atlantic Freeboard (if required) =	✓			Other corrections, scantlings, etc.	4.89
				Summer Freeboard =	12.50

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

Tropical Fresh Water Line above Centre of Disc	...	...	Tropical Fresh Water Freeboard	...	...
Fresh Water Line	...	...	Fresh Water	...	...
Tropical Line	...	...	Tropical	...	...
Winter Line	Winter
Winter North Atlantic Line	Winter North Atlantic

8.11.45

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