

EMPIRE GOBLIN
No. 36827Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

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

Jhd. 2067 9 DEC 1943

Index. No. 37466
(For London Office only).

Ship's Name "EMPIRE HUMPHREY"	Official Number 169344	Nationality and Port of Registry BRITISH HULL.	Gross Tonnage 274.35	Date of Build 1943	Port of Survey Hull.
Moulded Dimensions: Length 105'-0" Breadth 26'-6" Depth 13'-0"					Date of Survey During construction
Moulded displacement at moulded draught = 85 per cent. of moulded depth 504 tons T.P.I. = 5.2					Surveyor's Signature J.R. Macleod
Coefficient of fineness for use with Tables .68 (1.574 actual)					Particulars of Classification *100 A.1. "FOR TOWING SERVICES" (CONTEMPLATED)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 13'-0"	(a) Where D is greater than Table depth (D-Table depth) R = (13.03 - 7.00) .808 = +4.87	Moulded Breadth (B) 26'-5"
Stringer plate029	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 6.03	Standard Round of Beam = $\frac{B \times 12}{50} = 6.36$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures ✓	Ship's Round of Beam = 7½"
Depth for Freeboard (D) = 13'-0.29		Difference 1.14
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.14}{4} = -.29$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
.. overhang ...					
R.Q.D. enclosed ...					
.. overhang ...					
Bridge enclosed ...					
.. overhang aft ...					
.. overhang forward ...					
F'cle enclosed ...					
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward ...					
Total ...					

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

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

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

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

Percentage from Table, Line A.
(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 = Nil

SHEERS MEASURED FROM TOP OF KEEL
TO DECK AT SIDE.

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	20.50	1		20.50	56.00	36.00	1		36.00
1/4 L from A.P. ...	9.12	4		36.48	17.50	17.50	4		70.00
2/4 L " ...	2.255	2		4.51	6.00	6.00	2		12.00
Amidships ...	-	4		-	13.00	-	4		-
3/4 L from F.P. ...	4.51	2		9.02	4.25	4.25	2		8.50
1/4 L " ...	18.25	4		73.00	24.00	24.00	4		96.00
F.P. ...	41.00	1		41.00	60.00	60.00	1		60.00
Total ...				184.51					282.50

Mean actual sheer aft =
Mean standard sheer aft =Mean actual sheer forward =
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{21} \right) = \frac{97.99}{18} \times 75 = -4.08$
If limited on account of midship superstructure. No. Flush Deck

If limited to maximum allowance of 1½ ins. per 100 ft. Yes, -1.58

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.Ft.
Depth to Freeboard Deck = 13.03
Summer freeboard = 1.25
Moulded draught (d) = 11.78Deduction for Tropical freeboard and addition for
Winter freeboard = $\frac{d}{4}$ inches = 2.94 = 3"
Addition for Winter, North Atlantic Freeboard (if required) = 5"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 555$

Tons per inch immersion at summer load water line

T = 5.29

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

= 2.62 = 2½"

MEAN DRAFT	EKT DISP.	TONS PER I"
12'0"	532	5.22
11'0"	468	5.03
10'0"	408	4.84

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient ✓

Depth Correction ... 4.87

Deduction for superstructures ...

Sheer correction ... 1.58

Round of Beam correction29

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+ -

4.87 -

- -

- 1.58

- .29

- -

- -

4.87 1.87 + 3.00

Summer Freeboard = 15.07

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

Tropical Fresh Water Line above Centre of Disc ... 5½" 14 cm.

Fresh Water Line " " ... 2½" 6 "

Tropical Line " " ... 3" 8 "

Winter Line below " " ... 3" 8 "

Winter North Atlantic Line " " ... 5" 13 "

Tropical Fresh Water Freeboard ... 9½" 24 cm.

Fresh Water " " ... 0½" 12 "

Tropical " " ... 1½" 0 "

Winter " " ... 1½" 6 "

Winter North Atlantic " " ... 1½" 8 "

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.

Trade of ship FOR TOWING SERVICES.

Names of sister ships "EMPIRE SYBIL" - "EMPIRE SARA".

Builder's name and yard number COCHRANE & SONS LTD- SEBUSY. YARD NO 1273.

Owners THE MINISTRY OF WAR TRANSPORT.

Fee £ To BE CHARGED IN THE FIRST ENTRY.



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Foundation