

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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

Ship's Name "EMPIRE BARBARA"	Official Number 180320	Nationality and Port of Registry BRITISH. HULL.	Gross Tonnage 274.	Date of Build 1945	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					Surveyor's Signature W. Macleod
Coefficient of fineness for use with Tables .68 (.574 actual) T = 5.2					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) x .808 = + 4.87	Moulded Breadth (B) 26.5'
Stringer plate029	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} =$ 6.36
Sheathing on exposed deck ✓	If restricted by superstructures ✓	Ship's Round of Beam = 7 1/2"
$T \left(\frac{L-S}{L} \right) =$		Difference 1.14
Depth for Freeboard (D) = 13'-029		Restricted to ✓
		Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.14}{4} = -.29.$

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 $\frac{S}{L} =$ **Flush Deck.**

„ „ $\frac{S_1}{L} =$

„ „ $\frac{E}{L} =$

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	36.00	36.00	1		36.00
1/8 L from A.P. ...	9.12	4		36.48	17.50	17.50	4		70.00
3/8 L „	2.255	2		4.51	6.00	6.00	2		12.00
Amidships	-	4		-	13.00	-	4		-
3/8 L from F.P. ...	4.51	2		9.02	4.25	4.25	2		8.50
1/8 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

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{97.99 \times .75}{18} = -4.08$

If limited on account of midship superstructure. **No. Flush Deck.**

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

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

„ „ aft of „ =

If limited to maximum allowance of 1 1/2 ins. per 100 ft. **1/16 - 1.58**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard.	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 = $\frac{\Delta}{40 T}$ inches $= \frac{555}{40 \times 5.29} = 2.62 = 2 1/2$	TABULAR FREEBOARD corrected for Flush Deck (if required)	12.07
Depth to Freeboard Deck = 13.03		Correction for coefficient	12.07
Summer freeboard = 1.25		Depth Correction	4.87
Moulded draught (d) = 11.78		Deduction for superstructures	-
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 2.94 = 3		Sheer correction	1.58
Addition for Winter North Atlantic Freeboard (if required) = 5		Round of Beam correction	-29
		Correction for Thickness of Deck amidships	-
		Other corrections, scantlings, etc.	-
		Summer Freeboard = 15.07	+ 3.00

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

Tropical Fresh Water Line above Centre of Disc	5 1/2	Tropical Fresh Water Freeboard	0'-9 1/2
Fresh Water Line „ „	2 1/2	Fresh Water „ „	1'-0 1/2
Tropical Line „ „	3	Tropical „ „	1'-0
Winter Line below „ „	3	Winter „ „	1'-6
Winter North Atlantic Line „ „	5	Winter North Atlantic „ „	1'-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 JOSEPHINE" "EMPIRE CHRISTOPHER" "EMPIRE JENNY"

Builder's name and yard number COCHRANE & SONS LTD. YARD N° 1292.

Owners THE MINISTRY OF WAR TRANSPORT.

Fee £ TO BE CHARGED WITH FIRST ENTRY.



© 2020

Lloyd's Register
Foundation