

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRK. REPORT NO. 23182

Ship's Name "EMPIRE FRIEDA"	Official Number 169463	Nationality and Port of Registry BRITISH. GREENOCK. GLASSGOW	Gross Tonnage 295	Date of Build WHILE BUILDING.	Port of Survey PORT GLASGOW.
Moulded Dimensions: Length 115'-0" Breadth 27'-6" Depth 13'-6"					Date of Survey WHILE BUILDING.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 580 tons					Surveyor's Signature J. J. Jamieson
Coefficient of fineness for use with Tables .68 (559 actual)					Particulars of Classification + 100 A.1. FOR TOWING SERVICES. (CONTEMPLATED)

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	13'-5"	(a) Where D is greater than Table depth (D-Table depth) R = 13.58-7.67 = +5.23"		Moulded Breadth (B)	27'-5"
Stringer plate	35"	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 5.91"		Standard Round of Beam = $\frac{B \times 12}{50}$	6.60"
Sheathing on exposed deck	2 1/2" O.P.			Ship's Round of Beam	8"
$T \left(\frac{L-S}{L} \right) = \frac{27}{115} \times \frac{2.5}{12}$.05"			Difference	= 1.40"
Depth for Freeboard (D) =	13.58	If restricted by superstructures	✓	Restricted to	
				Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L} \right)$	= 1.40 - .35 = 1.05"

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					
Forecastle enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" forward					
Total					

FLUSH DECK

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

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

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

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

Percentage from Table, Line A.
(corrected for absence of fore-castle (if required))

Percentage from Table, Line B.
(corrected for absence of fore-castle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **Nil**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	21.50	1		21.50	18"	36	1		36.00
1/8 L from A.P.	9.57	4		38.28	8 1/4"	20.25	4		81.00
3/8 L	2.365	2		4.73	2"	8	2		16.00
Amidships	-	4		-	0	-	4		-
3/8 L from F.P.	4.73	2		9.46	8 1/2"	2.5	2		5.00
1/8 L	19.135	4		76.54	31"	19.0	4		76.00
F.P.	43.00	1		43.00	7 1/2"	53.5	1		53.50
Total				193.51					267.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{73.99}{18} \times .75 = -3.08"$ If limited to maximum allowance of 1 1/2 ins. per 100 ft. **Yes -1.73"**

If limited on account of midship superstructure. **No, flush deck**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 13.53' Summer freeboard = 1.31' Moulded draught (d) = 12.22' Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.05' = 3" Addition for Winter North Atlantic Freeboard (if required) = 5"	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 11.0' = 551 \text{ TONS}$ $\Delta = 12.0' = 622 \text{ TONS}$ Tons per inch immersion at summer load water line $T = 11.0' = 5.88 \text{ TONS}$ $12.0' = 6.10 \text{ TONS}$ Deduction = $\frac{\Delta}{40 T}$ inches = 638 $40 \times 6.14 = 245.6$ $= 2 1/2"$	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient None <table border="1"> <tr><th></th><th>+</th><th>-</th></tr> <tr><td>Depth Correction</td><td>5.23</td><td>-</td></tr> <tr><td>Deduction for superstructures</td><td>-</td><td>-</td></tr> <tr><td>Sheer correction</td><td>-</td><td>1.73</td></tr> <tr><td>Round of Beam correction</td><td>-</td><td>.35</td></tr> <tr><td>Correction for Thickness of Deck amidships</td><td>-</td><td>.60</td></tr> <tr><td>Other corrections, scantlings, etc.</td><td>-</td><td>-</td></tr> <tr><td>Summer Freeboard</td><td>5.23</td><td>1.65</td></tr> </table>		+	-	Depth Correction	5.23	-	Deduction for superstructures	-	-	Sheer correction	-	1.73	Round of Beam correction	-	.35	Correction for Thickness of Deck amidships	-	.60	Other corrections, scantlings, etc.	-	-	Summer Freeboard	5.23	1.65
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	5 1/2"	Tropical Fresh Water Freeboard	10 1/4"
Fresh Water Line	2 1/2"	Fresh Water	1 1/4"
Tropical Line	3"	Tropical	0.34"
Winter Line below	3"	Winter	6 3/4"
Winter North Atlantic Line	5"	Winter North Atlantic	8 3/4"

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 TOWING SERVICES.

Names of sister ships -

Builder's name and yard number FERGUSON BROS (PORT GLASGOW) LTD, YARD NO 377.

Owners MINISTRY OF WAR TRANSPORT.

Fee £ 4 : 0 / 0
APPROX.



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