

EMPIRE NEWTON
No. 36698 Etc.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 37349
(For London Office only.)N^o 33762

Ship's Name EMPIRE CAMP NN VALACIA	Official Number 169124	Nationality and Port of Registry BRITISH SUNDERLAND Liverpool	Gross Tonnage 7051.7	Date of Build	Port of Survey SUNDERLAND
Moulded Dimensions: Length 425.83 ft Breadth 56.0 Depth 37.67 2 nd DECK 28.67 TO & OF RUDDER STOCK C 32.01 = 17160 Moulded displacement at moulded draught = 85 per cent. of moulded depth C 24.26 = 12505 tons				Date of Survey WHILE BUILDING	
Coefficient of fineness for use with Tables .788 (32.01) 759 (24.50)				Surveyor's Signature <i>R. Wilson</i>	
				Particulars of Classification * 100 A.I. WITH FREEBOARD (CONTEMPLATED)	

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 37.67	(a) Where D is greater than Table depth (D-Table depth) R = (37.72 - 28.39) 3 = +27.99"	Moulded Breadth (B) 56.0
Stringer plate ... UPPER DX 65" .05	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓	Standard Round of Beam = $\frac{B \times 12}{50} = 13.44$
Sheathing on exposed deck ✓ $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures ✓	Ship's Round of Beam = 14
Depth for Freeboard (D) = 37.72		Difference .56
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times 9.162 = -.13$

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 ...	35.67	35.67	6.75	6.75/7.5	32.10
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	35.67	35.67			32.10

Standard Height of Superstructure	7.5
" " R.Q.D.	✓
Deduction for complete superstructure	42.00
Percentage covered $\frac{S}{L} =$	} 8.38
" " $\frac{S_1}{L} =$	
" " $\frac{E}{L} = 7.54$	
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	3.77
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	✓
Interpolation for bridge less than .2L (if required)	✓
Deduction = 42 × .0377 = -1.58"	

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	52.58	1	52.58	32.06	32.06	1	32.06
$\frac{1}{2}$ L from A.P. ...	23.395	4	93.58	.03	.03	4	.12
$\frac{3}{4}$ L " ...	5.785	2	11.57	-	-	2	-
Amidships ...	-	4	-	-	-	4	-
$\frac{3}{4}$ L from F.P. ...	11.57	2	23.14	-	-	2	-
$\frac{1}{2}$ L " ...	46.79	4	187.16	6.38	6.38	4	25.52
F.P. ...	105.17	1	105.17	81.00	81.00	1	81.00
Total ...			473.20				138.70

Mean actual sheer aft =
Mean standard sheer aft =Mean actual sheer forward =
Mean standard sheer forward =Length of enclosed superstructure forward of amidships =
L

" " aft of " = Nil.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{334.50}{18} (.75 - .0419) = +13.16"$
If limited on account of midship superstructure. ✓

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 = 37.72 Summer freeboard = 11.08 Moulded draught (d) = 26.64 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.66 = 6 $\frac{3}{4}$ Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 13965$ Tons per inch immersion at summer load water line $T = 49.25$ Deduction = $\frac{\Delta}{40 T}$ inches = 7.09 = 7"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.787 + .68}{1.36} = 1.467/1.36$ <table border="1"> <tr> <th></th><th>+</th><th>-</th></tr> <tr> <td>Depth Correction</td><td>27.99</td><td>-</td></tr> <tr> <td>Deduction for superstructures</td><td>-</td><td>1.58</td></tr> <tr> <td>Sheer correction</td><td>13.16</td><td>-</td></tr> <tr> <td>Round of Beam correction</td><td>-</td><td>.13</td></tr> <tr> <td>Correction for Thickness of Deck amidships</td><td>-</td><td>-</td></tr> <tr> <td>Other corrections, scantlings, etc. to correct to a Summer (Extreme) Draught</td><td>6.00</td><td>-</td></tr> <tr> <td></td><td>47.15</td><td>1.71</td></tr> <tr> <td>Summer Freeboard</td><td colspan="2">= 133.00</td></tr> </table>		+	-	Depth Correction	27.99	-	Deduction for superstructures	-	1.58	Sheer correction	13.16	-	Round of Beam correction	-	.13	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc. to correct to a Summer (Extreme) Draught	6.00	-		47.15	1.71	Summer Freeboard	= 133.00	
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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	...	13 $\frac{3}{4}$ "
Fresh Water Line	"	7"
Tropical Line	"	6 $\frac{3}{4}$ "
Winter Line below	"	6 $\frac{3}{4}$ "
Winter North Atlantic Line	"	✓

Tropical Fresh Water Freeboard	2 $\frac{1}{4}$ "
Fresh Water	1 $\frac{1}{2}$ "
Tropical	1 $\frac{1}{2}$ "
Winter	1 $\frac{1}{2}$ "
Winter North Atlantic	✓

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.

Displacement at 26'-9" draught = 13965 tons
Tons per inch *gm* = 49.25 tons

Trade of ship *Nos 2,3 & 5 holds and tween decks fitted for carrying refrigerated cargoes*

Names of sister ships *"EMPIRE BARDOLPH" SLO RPT NO 33595; "EMPIRE FRIENDSHIP" SLO RPT NO 33661; "EMPIRE MANOR" SLO RPT NO 33713*

Builder's name and yard number *SHORT BROTHERS LIMITED YARD NO 477*

Owners *MINISTRY OF WAR TRANSPORT*

Fee £ *18* - -

will be charged on completion.



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Foundation