

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name "EMPIRE CONVOY" (Ex "LEVENSAU")	Official Number 180585	Nationality and Port of Registry British London	Gross Tonnage 1000.14	Date of Build	Port of Survey Dull
Moulded Dimensions: Length 227'-8" Breadth 34'-3 1/2" Depth 22'-4" UPPER DK 14'-9" 2nd Dk.					Date of Survey 3rd, 4th, 13th, 16th & 20/7/45.
Moulded displacement at moulded draught = 85 per cent. of moulded depth tons					Surveyor's Signature F. I. Palmer
Coefficient of fineness for use with Tables .81 (estimated)					Particulars of Classification <input checked="" type="checkbox"/>

Depth for Freeboard (D). Moulded depth ... 22.33 Stringer plate03 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 22.36	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) R =$ $(22.36 - 15.18) \times 1.75 = +12.57$ 7.18 (b) Where D is less than Table depth (if allowed) $(\text{Table depth} - D) R =$ If restricted by superstructures	Round of Beam correction. Moulded Breadth (B) 34.29 Standard Round of Beam = $\frac{B \times 12}{50} =$ 8.23 Ship's Round of Beam = 8.50 Difference .27 Restricted to .8863 Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) =$ $\frac{.27}{4} \times \frac{.8863}{.8726} =$ -.06
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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 ...	29.00	25.88	7.5	-	25.88
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	29.00	25.88	7.5	-	25.88

Standard Height of Superstructure 6.0	R.Q.D. 28.77
Deduction for complete superstructure	
Percentage covered $\frac{S}{L} =$ 12.74	
" $\frac{S_1}{L} =$ 12.74	
" $\frac{E}{L} =$ 11.37	
Percentage from Table, Line A. 6.37	5.69
(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 = 28.77 \times .0637 = -1.83	.0589 1.64

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	32.77	1		32.77	24.00	24.00	1		24.00
1/4 L from A.P. ...	14.58	4		58.32	10.68	10.68	4		42.72
1/2 L " ...	3.605	2		7.21	2.64	2.64	2		5.28
Amidships ...	-	4		-	0.00	-	4		-
3/4 L from F.P. ...	7.21	2		14.42	8.38	8.30	2		16.60
3/2 L " ...	29.16	4		116.64	33.82	33.49	4		133.96
F.P. ...	65.54	1		65.54	76.00	75.26	1		75.26
Total ...				294.90					297.82

Mean actual sheer aft = **Deficient**
 Mean standard sheer aft = **Deficient**
 Mean actual sheer forward = **Excess**
 Mean standard sheer forward = **Excess**

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

 " aft of " = **Nil**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) =$ $\frac{2.92}{18} \left(\frac{.75 - .0637}{.8863} \right) =$ **-.11**

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Ft.
 Depth to Freeboard Deck = **22.36**
 Summer freeboard = **7.75**
 Moulded draught (d) = **14.61**

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **3.65 = 3 3/4**
 Addition for Winter North Atlantic Freeboard (if required) = **5 3/4**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$ **2580**
 Tons per inch immersion at summer load water line
 $T =$ **16.6**

Deduction = $\frac{\Delta}{40T}$ inches
 = **3.89**
 = **4"**

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

$$\frac{.81 + .68}{1.36} = \frac{1.49}{1.36}$$

	+	-
Depth Correction ...	12.57	
Deduction for superstructures ...		1.64
Sheer correction06
Round of Beam correction ...		
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. 28.06		
Summer Freeboard = 93.00		

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

Tropical Fresh Water Line above Centre of Disc ...	4"
Fresh Water Line " " ...	4"
Tropical Line " " ...	Nil
Winter Line below " " ...	3 3/4"
Winter North Atlantic Line " " ...	5 3/4"

Tropical Fresh Water Freeboard ...	7.9
Fresh Water " " ...	7.5
Tropical " " ...	7.9 (limited)
Winter " " ...	8.0 3/4
Winter North Atlantic " " ...	8.2 3/4

File $\frac{4}{10} = \frac{29.00}{22.77} \div 2 = 3.11$
 $\frac{22.77}{25.88}$

Fee £ 10 to be charged with the Plan. H.

(1894)

