

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No. 37234
(For London Office only.)
20 APR 1943

Ship's Name "EMPIRE VICEROY"	Official Number 169036	Nationality and Port of Registry BRITISH BARROW.	Gross Tonnage 7803.27 8045 (APPROX.)	Date of Build 1943.	Port of Survey BARROW
Moulded Dimensions: Length (82) 44'-0" Breadth AT. UP. DE. 66'-4" Depth 33'-52" "AS BUILT." <i>To centre of rudder stock. "AS BUILT"</i>					Date of Survey WHILE BUILDING.
Moulded displacement at moulded draught = 85 per cent. of moulded depth (28'-48") 16,245 tons					Surveyor's Signature S. Bowman.
Coefficient of fineness for use with Tables .68 (677 actual)					Particulars of Classification + 100 A1.

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 33.46	(a) Where D is greater than Table depth (D - Table depth) R = (33.54 - 29.67) 3 = +11.61"	Moulded Breadth (B) at deck 66.33
Stringer plate ... 1.00" ... +0.08	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 3.87	Standard Round of Beam = $\frac{B \times 12}{50} =$ 15.92
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ nil	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = 16"
Depth for Freeboard (D) = 33.54		Difference = .08
		Restricted to <input checked="" type="checkbox"/>
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.08}{4} \times .5499 = -.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ... 116.71	46.42	116.71	7.5 cr.	<input checked="" type="checkbox"/>	116.71	Standard Height of Superstructure 7.5
" overhang ...	<input checked="" type="checkbox"/>					" " R.Q.D. <input checked="" type="checkbox"/>
R.Q.D. enclosed ...	<input checked="" type="checkbox"/>					Deduction for complete superstructure 42.00
" overhang ...	<input checked="" type="checkbox"/>					Percentage covered $\frac{S}{L} =$ 45.24
Bridge enclosed ... 29.78	29.78	29.78	7.5 cr.	<input checked="" type="checkbox"/>	29.78	" " $\frac{S_1}{L} =$ 45.01
" overhang aft ...	<input checked="" type="checkbox"/>					" " $\frac{E}{L} =$ 45.01
" overhang forward ...	<input checked="" type="checkbox"/>					Percentage from Table, Line A. 27.76
F'cle enclosed ... 52.84	52.84	52.84	8.0	<input checked="" type="checkbox"/>	52.84	(corrected for absence of forecastle (if required))
" overhang ...	<input checked="" type="checkbox"/>		5.5			Percentage from Table, Line B. 31.76
Trunk aft ...	<input checked="" type="checkbox"/>					(corrected for absence of forecastle (if required))
" forward ...	<input checked="" type="checkbox"/>					Interpolation for bridge less than 2L (if required) 27.76 + (4 x .069) = 29.14
Tonnage opening aft ...	<input checked="" type="checkbox"/>					Deduction = 42.00 x .2914 = -12.24
" forward ...	<input checked="" type="checkbox"/>					
Total ...	201.30	200.31			200.31	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	54.50	1		54.50	60.00"	60.00	1		60.00	Mean actual sheer aft = Mean standard sheer aft = } EXCESS
$\frac{1}{4}$ L from A.P. ...	24.255	4		97.02	26.67"	26.67	4		106.68	
$\frac{3}{4}$ L " ...	5.995	2		11.99	6.67"	6.67	2		13.34	
Amidships ...	-	4		-	<input checked="" type="checkbox"/>	-	4		-	Length of enclosed superstructure forward of amidships =
$\frac{3}{4}$ L from F.P. ...	11.99	2		23.98	13.33"	13.33	2		26.66	" " aft of " = } NIL.
$\frac{1}{4}$ L " ...	48.51	4		194.04	53.33"	53.33	4		213.32	
F.P. ...	109.00	1		109.00	120.00"	120.00	1		120.00	
Total ...				490.53					540.00	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{49.47}{18} \left(\frac{.75 - .2262}{.5238} \right) = -1.44"$
If limited on account of midship superstructure. **Yes, NIL.** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ☒

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

Depth to Freeboard Deck = **33.54**
Summer freeboard = **7.08**
Moulded draught (d) = **26.46**
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = **6.61 = 6 $\frac{1}{2}$ "**
Addition for Winter North Atlantic Freeboard (if required) = ☒

Deduction for Fresh Water.

Displacement in salt water at summer load water line **(29'-0")**
 $\Delta =$ **15,346 15107**
Tons per inch immersion at summer load water line **(27'-0")**
 $T =$ **56.27**
Deduction = $\frac{\Delta}{40T}$ inches = **6.71**
= **6 $\frac{3}{4}$ "**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **NIL.**

Depth Correction ... **11.61**
Deduction for superstructures ... **12.24**
Sheer correction ... **0.01**
Round of Beam correction ... **0.01**
Correction for Thickness of Deck amidships ... **0.01**
Other corrections, scantlings, etc. ... **0.01**

85.55
85.55
11.61 12.25 - .64
Summer Freeboard = **84.91**

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

Tropical Fresh Water Line above Centre of Disc ... 13$\frac{1}{4}$"	Tropical Fresh Water Freeboard ... 5'-11$\frac{3}{4}$"
Fresh Water Line " " ... 6$\frac{3}{4}$"	Fresh Water " " ... 6'-6$\frac{1}{4}$"
Tropical Line " " ... 6$\frac{1}{2}$"	Tropical " " ... 6'-6$\frac{1}{2}$"
Winter Line below " " ... 6$\frac{1}{2}$"	Winter " " ... 7'-7$\frac{1}{2}$"
Winter North Atlantic Line " " ... 6$\frac{1}{2}$"	Winter North Atlantic " " ... 7'-7$\frac{1}{2}$"