

Lloyd's Register of Shipping.

36859
Index. No.
(For London Office only).

SURVEYS FOR FREEBOARD.

12 JUN 1942

33412

HOLLYBANK (COMPUTATION FOR STEAMER, ~~SAILING SHIP, TANKER.~~)

Ship's Name "EMPIRE SOUTHEY" n.n. OCEAN UNIT. (164)	Official Number 169023	Nationality and Port of Registry BRITISH SUNDERLAND	Gross Tonnage 7040.65	Date of Build 1942	Port of Survey SUNDERLAND
Moulded Dimensions: Length 425.83 Breadth 56.0 Depth 37.67 To & of RUDDER HEAD @ 32.01 17160				Date of Survey WHILE BUILDING	
Moulded displacement at moulded draught = 85 per cent. of moulded depth @ 24.36 - 12583 tons				Surveyor's Signature <i>R.M. Wilson</i>	
Coefficient of fineness for use with Tables .788 (32.01) .759 (24.36)				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 $(D - \text{Table depth}) R = (37.72 - 28.39) \times 3 = +27.99"$	Moulded Breadth (B) 56.0
Stringer plate ... 05	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 9.33	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 = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times .9162 = -.13"$

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. **3.77**
(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 = **42 x .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
1/4 L from A.P. ...	23.395	4		93.58	.03	.03	4		.12
1/2 L " ...	5.785	2		11.57			2		
Amidships ...		4					4		
3/4 L from F.P. ...	11.57	2		23.14			2		
3/8 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 ...				473.25					138.70

Mean actual sheer aft =
Mean standard sheer aft = } **Deficient.**
Mean actual sheer forward =
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships = } **Nie.**
" " aft of " =
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{334.5}{18} (.75 - .0419) = +13.16"$
If limited on account of midship superstructure. **.7081** 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.	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 = $\frac{\Delta}{40T}$ inches = 7.09 = 7"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{787 + .68}{1.36} = 1.467/1.36$ Depth Correction ... 27.99 Deduction for superstructures ... 13.16 Sheer correction13 Round of Beam correction ... 1.58 Correction for Thickness of Deck amidships ... 6.20 Other corrections, scantlings, etc. to an approved summer extreme draught of 26'-9" 47.15 Summer Freeboard = 133.20	81.18 87.56 82.3 15-6-42 + 45.44
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 3/4" Addition for Winter North Atlantic Freeboard (if required) = ✓			

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

Tropical Fresh Water Line above Centre of Disc ... 13 3/4" 35 cm.	Tropical Fresh Water Freeboard ... 9'-11 1/4" 303
Fresh Water Line " " ... 7" 18	Fresh Water " " ... 10'-6" 320
Tropical Line " " ... 6 3/4" 17	Tropical " " ... 10'-6 1/4" 321
Winter Line below " " ... 6 3/4" 17	Winter " " ... 11'-7 3/4" 355
Winter North Atlantic Line " " ... ✓	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 = 49.25 "✓

over

over

Trade of ship

Names of sister ships EMPIRE NEWTON SUNDERLAND RPT NO 33254 EMPIRE STORY SUNDERLAND RPT NO 33327 EMPIRE KEATS SUNDERLAND RPT NO 33365

Builder's name and yard number Messrs Short Brothers Limited NO 471 ✓ (Plans now in Wokingham)

Owners Ministry of War Transport.

Fee £ 18 — —

will be charged on completion.



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Foundation