

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

GRK. REPORT N° 21522

Ship's Name EMPIRE TIDE	Official Number 168969	Nationality and Port of Registry BRITISH GREENOCK	Gross Tonnage APPROX 6900 <i>6956 per n. gr. for dtd. 18.6.54</i>	Date of Build 1941	Port of Survey GREENOCK
Moulded Dimensions: Length 425' 88" Breadth 56 Depth 36' 10" To UPPER Dk (FABRICATED STERN FRAME FITTED) ✓ Moulded displacement at moulded draught = 85 per cent. of moulded depth To UPPER Dk 16082 ✓ Coefficient of fineness for use with Tables 754.					Date of Survey WHILE BUILDING
Surveyor's Signature <i>Kenneth S. S. S.</i>					Particulars of Classification +100A.1 (CONT) WITH FREEBOARD

Depth for Freeboard (D) = 36.83 Moulded depth ... 36.83 Stringer plate ... 06 Sheathing on exposed deck $T = \frac{L-S}{11} = 1\frac{1}{8}$ COMPOSITION AFT OF FRAME 18 Depth for Freeboard (D) = 36.89	Depth correction. (a) Where D is greater than Table depth $(D - \text{Table depth}) R = (36.89 - 18.39) = +12.50"$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = 8.50 If restricted by superstructures ✓	Round of Beam correction. Moulded Breadth (B) 56 Standard Round of Beam = $\frac{B \times 12}{50} = 13.44$ Ship's Round of Beam = 14 Difference Excess 56 Restricted to Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{56}{4} \times 0.9181 = -13"$
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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 ...					
Fore enclosed ...	34.88	34.88	7.6	✓	34.88
.. overhang ...					
Trunk aft ...					
.. forward ...					
Tonnage opening aft ...					
.. forward ...					
Total ...	34.88	34.88			34.88

Standard Height of Superstructure	7.5'
.. R.Q.D.	42.00"
Deduction for complete superstructure	
Percentage covered $\frac{S}{L} =$	8.19
Percentage from Table, Line A.	4.10
(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 =	42.00 x 0.0410 = -1.72"

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	51.59	1	51.59	54	54.00	1	54.00
1/4 L from A.P. ...	13.40	4	93.60	24	24.00	4	96.00
1/2 L ..	5.785	2	11.57	6	6.00	2	12.00
Amidships ...	-	4	-	0	-	4	-
3/4 L from F.P. ...	11.57	2	23.14	12	12.00	2	24.00
1/4 L ..	46.805	4	187.22	48	48.00	4	192.00
F.P. ...	105.18	1	105.18	108	108.00	1	108.00
Total ...			473.30				486.00

Mean actual sheer aft = **Excess**
 Mean standard sheer aft =
 Mean actual sheer forward =
 Mean standard sheer forward =
 Length of enclosed superstructure forward of amidships = **Nu**
 .. aft of .. =

Correction = $\frac{\text{Difference between sums of products}}{18} = \frac{473.30 - 486.00}{18} = -0.722$
 If limited on account of midship superstructure. **7.5' Nu.**
 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. Depth to Freeboard Deck = 36.89 Summer freeboard = 10.69 Moulded draught (d) = 26.20 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.55 = 6 1/2" Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line = 27-13663 $\Delta = 26-13091$ Tons per inch immersion at summer load water line = 27-4767 $T = 26-4742$ Deduction = $\frac{\Delta}{40T}$ inches = 6.99 = 7"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient 79.62 + 1.16 75.4 + 6.8 = 1.434 / 1.36 1.36 Depth Correction ... 15.50 Deduction for superstructures ... 1.72 Sheer correction ... 13 Round of Beam correction ... 19.43 Correction for Thickness of Deck amidships ... 44.93 Other corrections, scantlings, etc. 1.85 Summer Freeboard = 43.08 14.8.25
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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 1/4"	Tropical Fresh Water Freeboard	10' 8 1/4"
Fresh Water Line	7"	Fresh Water	9' 6 3/4"
Tropical Line	6 1/2"	Tropical	10' 1 1/4"
Winter Line below	6 1/2"	Winter	10' 1 3/4"
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.

Trade of ship

INTERNATIONAL.

Names of sister ships

EMPIRE SPRING, GREENOCK REPORT NO 21425. ('X' TYPE M.O.W.T.)

Builder's name and yard number

LITHGOWS LTD NO 945

Owner

MINISTRY OF WAR TRANSPORT

APPROX

Fee £

17

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TO BE RENDERED WITH FIRST ENTRY



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Foundation