

EMPIRE AUSTIN
No. 36799
ETC.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index No. 37062
(For London Office only).

GRK. REPORT N° 22082.

Ship's Name EMPIRE PENNANT.	Official Number	Nationality and Port of Registry BRITISH. GREENOCK	Gross Tonnage APPROX 7000	Date of Build 1942	Port of Survey GREENOCK
Moulded Dimensions: Length 425' 6 1/2" Breadth 56 Depth 27' 9" <i>ON 26'-1 1/2" W.L. (TO CR O P STOCK)</i> UPPER DK 16400				Date of Survey WHILE BUILDING 1942.	
Moulded displacement at moulded draught = 85 per cent. of moulded depth 27' 9" 11985 tons				Surveyor's Signature Kenneth Agis.	
Coefficient of fineness for use with Tables .769				Particulars of Classification +100 A1. WITH FREEBOARD (CONT'D)	

Depth for Freeboard (D) Moulded depth ... 36.83 Stringer plate ... 27.75 Sheathing on exposed deck ... 27.60 $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 36.90	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = (36.90 - 28.39) 3 = +25.53 (b) Where D is less than Table depth (if allowed) (Table depth - D) R = 8.51 If restricted by superstructures <input checked="" type="checkbox"/>	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 .56 Restricted to <input checked="" type="checkbox"/> Correction = $\frac{\text{Diff}^a}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times .9181 = -.13$
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	34' 6 1/2"	34.88	7'-6"	<input checked="" type="checkbox"/>	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. ☒
 Deduction for complete superstructure **42.00**
 Percentage covered $\frac{S}{L} =$
 $\frac{S_i}{L} =$ } **8.19**
 $\frac{E}{L} =$
 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 .0410 = -1.72**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.59	1		52.59	54.	54	1		54.00
1/2 L from A.P. ...	23.40	4		93.60	24	24	4		96.00
2/2 L " ...	5.785	2		11.57	6	6	2		12.00
Amidships ...	-	4		-	0	-	4		-
3/2 L from F.P. ...	11.57	2		23.14	12	12	2		24.00
1/2 L " ...	46.805	4		187.22	48	48	4		192.00
F.P. ...	105.18	1		105.18	108	108	1		108.00
Total ...				473.30					486.00

Mean actual sheer aft =
 Mean standard sheer aft = } **Excess**
 Mean actual sheer forward =
 Mean standard sheer forward = }
 Length of enclosed superstructure forward of amidships = } **NIL**
 " " aft of " = }
 Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{12.7}{18} \left(\frac{.75 - .0410}{.7090} \right) = -.50$
 If limited on account of midship superstructure. **Yes NIL.** 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 = 36.90 Summer freeboard = 10.79 Moulded draught (d) = 26.11 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.52 = 6 1/2" Addition for Winter North Atlantic Freeboard (if required) = <input checked="" type="checkbox"/>	Deduction for Fresh Water. Displacement in salt water at summer load water line 27-13975 $\Delta = 26 - 13975$ 13534 Tons per inch immersion at summer load water line 27-48.33 $T = 26 - 48.00$ 48.08 Deduction = $\frac{\Delta}{40T}$ inches = 7.04 = 7"	TABULAR FREEBOARD corrected for Flush Deck (if required) 80.78 Correction for coefficient $\frac{.769 + .68}{1.36} = 1.449/1.36$ 86.05 <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction ...</td> <td>25.53</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures ...</td> <td>-</td> <td>1.72</td> </tr> <tr> <td>Sheer correction ...</td> <td>-</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 correspond with a summer moulded draught of 26'-1 1/4" (26'-1 3/8" Actual).</td> <td>19.77</td> <td>-</td> </tr> <tr> <td></td> <td>45.30</td> <td>1.85</td> </tr> <tr> <td>Summer Freeboard =</td> <td>129.50</td> <td></td> </tr> </table>		+	-	Depth Correction ...	25.53	-	Deduction for superstructures ...	-	1.72	Sheer correction ...	-	-	Round of Beam correction ...	-	.13	Correction for Thickness of Deck amidships ...	-	-	Other corrections, scantlings, etc. to correspond with a summer moulded draught of 26'-1 1/4" (26'-1 3/8" Actual).	19.77	-		45.30	1.85	Summer Freeboard =	129.50	
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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 1/2"	Tropical Fresh Water Freeboard ...	9'-2 1/2"
Fresh Water Line " " ...	7"	Fresh Water " " ...	10' - 2 1/2"
Tropical Line " " ...	6 1/2"	Tropical " " ...	10' - 3"
Winter Line below " " ...	6 1/2"	Winter " " ...	11' - 4"
Winter North Atlantic Line " " ...	✓	Winter North Atlantic " " ...	✓

003971-003979-0076

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.

For basis computation see Empire Baffin 36639

Trade of ship *International.*

Names of sister ships *Y3Type, LITHGOWS LTD No 971. EMPIRE LANCER GRK REPORT No 22027*

Builder's name and yard number *LITHGOWS LTD No 972*

Owners *Ministry of War Transport.*

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Fee £ *18 0 0*



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