

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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

Index. No. **38571**
(For London Office only).

Ship's Name EMPIRE KINGSWAY.	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build 1946	Port of Survey GREENOCK
					Date of Survey WHILST BUILDING.
Moulded Dimensions: Length 202'0" Breadth 32'7" Depth 15'1 7/8" To CR. OF RUDDER STOCK. To UPPER DECK LINE PRODUCED To 38					Surveyor's Signature <i>Wharmillan</i>
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1760 tons					Particulars of Classification
Coefficient of fineness for use with Tables 726					

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 15.16	(a) Where D is greater than Table depth (D - Table depth) R = (15.19 - 13.47) × 1.553 = + 2.67"	Moulded Breadth (B) 32.58'
Stringer plate ... 3/8"03	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 1.72	Standard Round of Beam = $\frac{B \times 12}{50} =$ 7.82
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ NONE.	If restricted by superstructures	Ship's Round of Beam = $7 \frac{1}{8} =$ 7.88
Depth for Freeboard (D) = 15.19		Difference Excess .06
		Restricted to
		Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.06 \times 16.83}{4} =$.26

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	38.75	38.75	SEE SKETCH of PLAN of POOP		38.75	Standard Height of Superstructure 6.00
" overhang ...	-	-				" " R.Q.D. 3.680
R.Q.D. enclosed ...	94.00	94.00			94.00	Deduction for complete superstructure 26.2
" overhang ...	-	-				Percentage covered $\frac{S}{L} =$ 83.82
Bridge enclosed. EQUIVA.	13.33	13.33	SEE SKETCH of PLAN of BRIDGE		13.33	" " $\frac{S_1}{L} =$ 83.07
" overhang aft ...	-	-				" " $\frac{E}{L} =$ 79.10
" overhang forward	-	-				Percentage from Table, Line A. (corrected for absence of forecastle (if required))
Forecastle enclosed. OPEN	23.25	21.72		4.00	21.72	Percentage from Table, Line B. (corrected for absence of forecastle (if required))
" overhang ...	-	-				Interpolation for bridge less than 2L (if required)
Trunk aft ...						Deduction = 26.2 × .7910 = 20.72
" forward ...						
Tonnage opening aft ...						
" " forward						
Total ...	169.33	167.80			167.80	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	30.20	1		30.20	45.99	45.99	1		45.99
1/4 L from A.P. ...	13.44	4		53.76	20.46	20.46	4		81.84
1/2 L " ...	3.32	2		6.64	5.06	5.06	2		10.12
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	6.64	2		13.28	7.50	7.50	2		15.00
1/4 L " ...	26.88	4		107.52	31.87	31.87	4		127.48
F.P. ...	60.40	1		60.40	73.62	73.62	1		73.62
Total ...				271.80					354.05

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) =$ **82.25** $\times \left(75 - \frac{41.91}{18} \right) =$ **-1.57**

If limited on account of midship superstructure.

Mean actual sheer aft = **> 1**
Mean standard sheer aft = **> 1**

Mean actual sheer forward = **> 1**
Mean standard sheer forward = **> 1**

Length of enclosed superstructure forward of amidships = **> 1**
" " aft of " = **> 1**

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

Depth to Freeboard Deck = **Ft.**
Summer freeboard = **_____**
Moulded draught (d) = **_____**

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

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$
Tons per inch immersion at summer load water line
 $T =$
Deduction = $\frac{\Delta}{40T}$ inches = **_____**

SEE OVER.

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **726 + .68** **1.406** **1.36**

	+	-
Depth Correction ...	2.67	-
Deduction for superstructures ...	-	20.72
Sheer correction ...	-	4.51
Round of Beam correction 20 ...	6.42	-
Correction for Thickness of Deck amidships ...	6.42	-
Other corrections, scantlings, etc. ...	6.42	-

Summer Freeboard = **66.29**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck: **5' - 6 3/4"**

Tropical Fresh Water Line above Centre of Disc ...
Fresh Water Line " " ...
Tropical Line " " ...
Winter Line below " " ...
Winter North Atlantic Line " " ...

Tropical Fresh Water Freeboard ...
Fresh Water " " ...
Tropical " " ...
Winter " " ...
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.

$$\begin{array}{r} 20.3\frac{1}{2} \\ 4.7 \\ \hline 15.8\frac{1}{2} \checkmark \end{array}$$

EXTREME DRAUGHTS	EXTREME Δ SW.
15'0"	2116 TONS
14'0"	1958 "
13'0"	1795 "
12'0"	1642 "

KEEL ALLOWANCE = $\frac{7}{8}$ "

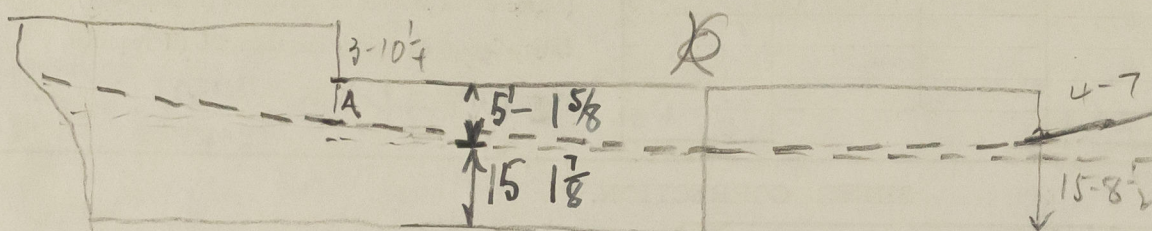
Bridge square $12 + \frac{2}{3} \times 2$
 $\frac{1.33}{13.33}$

Forecastle 23.25
 $\frac{4}{10} \quad 20.2$
 $\frac{3.05}{2}$

$$\begin{array}{r} 20.2 \\ 1.52 \\ \hline 21.72 \end{array}$$

After Sheer.

$$\begin{array}{r} 20.3\frac{1}{2} \\ 15.1\frac{7}{8} \\ \hline 5.1\frac{5}{8} \end{array}$$



Waterline A = 3.68'

$$\begin{array}{l} 44.16 \\ 62 \\ \hline 17.84 \end{array} \times \frac{101^2}{62.25^2} = 46.97 = \begin{array}{r} 3.92' \\ 15.13 \\ \hline 19.05' \end{array}$$

Runnel Deck $15.8\frac{1}{2}$
 $15.1\frac{7}{8}$
 $\frac{65}{8} = .55$

$$\begin{array}{r} 34 \\ 1.33 \\ \hline 32.67 \end{array}$$

$$\begin{array}{r} 3.83 \\ 15.16 \\ \hline 18.99 \\ 44.11 \\ \hline 5.12 \end{array}$$

5.12 is greater than standard h.p.

Trade of ship

Names of sister ships **EMPIRE LEWISHAM. YARD N° 234.**

Builder's name and yard number **GEO. BROWN & CO (MARINE) LD. YARD N° 235**

Owners **J. HAY & SONS. LD.**

Fee £



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