

13 MAY 1944

Rpt. C.11 (Comp.).

BT. COPY.

GLASGOW REPORT No. 68416.

Index. No. 36831
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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

EMPIRE RYM.
37501.

Ship's Name EMPIRE ROSEBERY	Official Number 169412 ✓	Nationality and Port of Registry BRITISH. GLASGOW.	Gross Tonnage 1944	Date of Build 1944	Port of Survey GLASGOW
Moulded Dimensions: Length 287.54 Breadth 44.0 Depth 19.5 [CR. OF RUDDER STOCK TO FORE PERP.]					Date of Survey WHILST BUILDING
Moulded displacement at moulded draught = 85 per cent. of moulded depth 4350 tons					Surveyor's Signature K. Thomson
Coefficient of fineness for use with Tables .726					Particulars of Classification +100 A.1. CARRYING PETROLEUM IN BULK [CONTEMPLATED]

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 19.50	(a) Where D is greater than Table depth (D - Table depth) R = (19.54 - 19.17) × 2.212 = +.82	Moulded Breadth (B) 44.0
Stringer plate ... 0.46	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = .37	Standard Round of Beam = $\frac{B \times 12}{50} =$ 10.56
Sheathing on exposed deck NONE	If restricted by superstructures	Ship's Round of Beam 6" = 6.00
T $\left(\frac{L-S}{L}\right) =$		Difference 4.56
Depth for Freeboard (D) = 19.54		Restricted to
		Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{4.56}{4} \times \frac{29.42}{44} = +.33$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poep enclosed ... EQUI. AT SIDE	75.21	75.21	7.5	-	75.21
overhang ... AT CENTRE	72.54				
R.Q.D. enclosed ...	75.38				
overhang ...					
Bridge enclosed ...					
overhang aft ...					
overhang forward ...					
F'cle enclosed ...	37.0	37.00	6.5	-	37.00
overhang ...					
Trunk ... EQUI. AT SIDE	178.0	90.74	6.5	-	90.74
forward ... AT CENTRE	175.16				
Tonnage opening aft ...					
forward ...					
Total ...	112.21	202.95			202.95

Standard Height of Superstructure **6.375**
" " R.Q.D. **34.50**
Deduction for complete superstructure **34.50**
Percentage covered $\frac{S}{L} =$ **39.02**
" " $\frac{S_1}{L} =$ **70.58**
Percentage from Table, Line **TANKER 63.71**
(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 = **34.50 × 63.71 = -21.98**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	38.75	1	38.75	39"	39	39	1	39.00	
1/4 L from A.P. ...	17.245	4	68.98	14"	14	14	4	56.00	
1/2 L " ...	4.265	2	8.53	0"	0	0	2	-	
Amidships ...	-	4	-	0"	0	0	4	-	
3/4 L from F.P. ...	8.53	2	17.06	4"	4	4.19	2	8.38	
1/4 L " ...	34.49	4	137.96	40"	40	40.87	4	163.48	
F.P. ...	77.50	1	77.50	81"	81	81.31	1	81.31	
Total ...			348.78					348.17	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{.61}{18} \left(\frac{.75 - .1951}{.75} \right) = +.02$
If limited on account of midship superstructure. ✓
Mean actual sheer aft = **deficient .784**
Mean standard sheer aft = **mean**
Mean actual sheer forward = **mean**
Mean standard sheer forward = **mean**
Length of enclosed superstructure forward of amidships = **Nil. TANKER.**
aft of " = **Nil. TANKER.**
SHEER AFT.

38.75	1	38.75	39.00	1	39.00
17.245	3	51.73	14.00	3	42.00
4.265	3	12.79	-	3	-
-	1	-	-	1	-
			103.29		
			81.00		

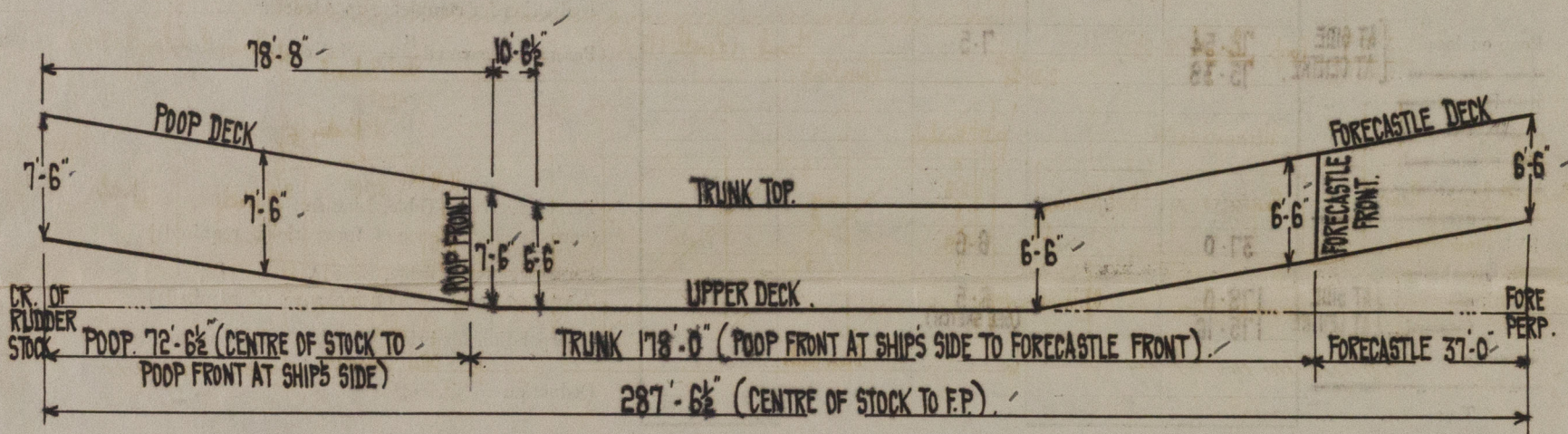
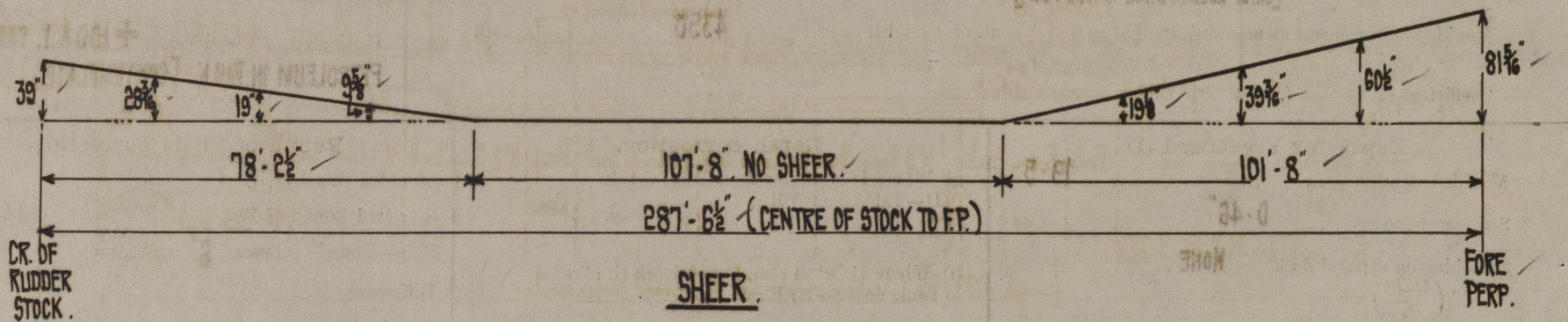
If limited to maximum allowance of 1 1/2 ins. per 100 ft. ✓

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	38.60
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line Δ = 4810	Correction for coefficient $\frac{.726 + .68}{1.36} = \frac{1.406}{1.36}$	39.91
Depth to Freeboard Deck = 19.54	Tons per inch immersion at summer load water line T = 25.08	Depth Correction82	
Summer freeboard = 1.58	Deduction = $\frac{\Delta}{40T}$ inches = 4.79	Deduction for superstructures ... 21.98	82.8
Moulded draught (d) = 17.96	DRAUGHT. EXT. DISP. (TONS. SW.) T.P.I.	Sheer correction02	8.5.4
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.49 = 4 1/2"	14.0 3623 24.05 16.0 4207 24.47 18.0 4804 25.08	Round of Beam correction33	
Addition for Winter North Atlantic Freeboard (if required) = 4.49 + 2.88 = 7.37 = 7 1/4"		Correction for Thickness of Deck amidships ... -	
		Other corrections, scantlings, etc. ... 0	
		Summer Freeboard = 19.10	

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

Tropical Fresh Water Line above Centre of Disc ... 9 3/4"	Tropical Fresh Water Freeboard ... 0-9 3/4"
Fresh Water Line " " ... 4 3/4"	Fresh Water " " ... 1-2 1/4"
Tropical Line " " ... 4 1/2"	Tropical " " ... 1-2 1/2"
Winter Line below " " ... 4 1/2"	Winter " " ... 1-11 1/2"
Winter North Atlantic Line " " ... 7 1/4"	Winter North Atlantic " " ... 2-2 1/4"

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.



$$\text{POOP } 4 \times \frac{2}{3} = 2.67$$

$$\frac{72.54}{75.21}$$

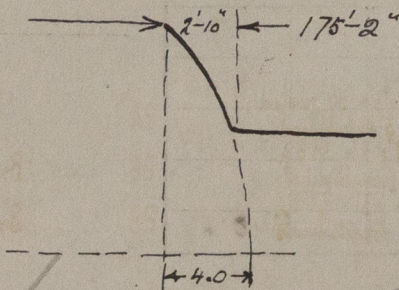
$$\text{TRUNK } 4.00$$

$$\frac{175.17}{174.00}$$

$$\frac{1}{3} \times 1.17 = .39$$

$$\frac{174.39}{32.67}$$

TAPER 141.72



$$32.67 \times \frac{23.33 + 18.67}{2 \times 44} = 15.59$$

$$141.72 \times \frac{23.33}{44} = 75.15$$

$$90.74$$

Trade of ship **INTERNATIONAL**

Names of sister ships **"EMPIRE PYM" [GRANGEMOUTH DOCKYARD'S N°448 - SEE GLASGOW REPORT N°67977]**

Builder's name and yard number **MESSRS BLYTHSWOOD SHIPBUILDING CO. LD. N° 77**

Owners **THE MINISTRY OF WAR TRANSPORT**

Est. Fee £ **12 0 0**

Freeboard Request Form 9 attached.
Plans of Midship Section and Profile and Decks enclosed for reference.

