

128 SEP 1942

Rpt. C.11 (Comp.).

EMPIRE MORDRED

No. 36877

Lloyd's Register of Shipping.

Index. No. 36985
(For London Office only).

SURVEYS FOR FREEBOARD.

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

CAPTAYANNIS

Ship's Name EMPIRE GERAINT.	Official Number 168739	Nationality and Port of Registry BRITISH. GLASSGOW.	Gross Tonnage 7018 M.O.T. 7.1.53.	Date of Build 1942.	Port of Survey GLASSGOW.
Moulded Dimensions: Length } 425.88 Breadth 56.0' Depth 37.67 To UPPER DK. ✓ To CR. OF STOCK } 28.67 To 2ND DK. ✓				Date of Survey WHILE BUILDING	
Moulded displacement at moulded draught = 85 per cent. of moulded depth 17100 UPPER DK. ✓ 12560 2ND DK. ✓ tons				Surveyor's Signature <i>Adickerson</i>	
Coefficient of fineness for use with Tables .784				Particulars of Classification +100 A.I. WITH FREEBOARD CORRESPONDING TO A SUMMER DRAFT OF 26'-9" EXTREME (KEEL 1/2) CONTEMPLATED	

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth	37.67	(a) Where D is greater than Table depth (D-Table depth) R = (37.72-28.39) x 3 = +27.99" ✓		Moulded Breadth (B)	56.0' ✓
Stringer plate	0.85" UPPER DK. .05 0.38 2ND DK.	(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 $T \left(\frac{L-S}{L} \right) =$	NIL	If restricted by superstructures ✓		Ship's Round of Beam	14.0" ✓
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)
Pop enclosed ...					
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	35.67	35.67	6'-9"	6.75/5	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 $\frac{S}{L} = 8.38$
" $\frac{S_1}{L} = 8.38$ ✓
" $\frac{E}{L} = 7.54$
Percentage from Table, Line A. **3.77**
(corrected for absence of fore-castle (if required)) ✓
Percentage from Table, Line B. ✓
(corrected for absence of fore-castle (if required)) ✓
Interpolation for bridge less than 2L (if required) ✓
Deduction = $42" \times .0377 = -1.58$ ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.59	1		52.59	33.0	33.00	1		33.00
1/2 L from A.P. ...	23.40	4		93.60	12.06	.06	4		.24
2/3 L " ...	5.785	2		11.57	-	-	2		-
Amidships ...	-	4		-	-	-	4		-
2/3 L from F.P. ...	11.57	2		23.14	-	-	2		-
1/2 L " ...	46.805	4		187.22	7.2	7.20	4		28.80
F.P. ...	105.18	1		105.18	81.0	81.00	1		81.00
Total				473.30					143.04

Mean actual sheer aft =
Mean standard sheer aft = } Deficient.
Mean actual sheer forward =
Mean standard sheer forward =
Length of enclosed superstructure forward of amidships =
" " aft of " = } NIL.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{330.26}{18} \left(\frac{75-.0419}{2} \right) = +12.99"$ ✓
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.

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) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 13902$ ✓
Tons per inch immersion at summer load water line
T = **48.9** ✓

Deduction = $\frac{\Delta}{40 T}$ inches **7.11**
= **7"** ✓
EXT. DR% **26-1/2** DISP(SW) **13520** T.P.I. **48.55**
27-1/2 **14130** **49.1**

TABULAR FREEBOARD corrected for Flush Deck (if required)

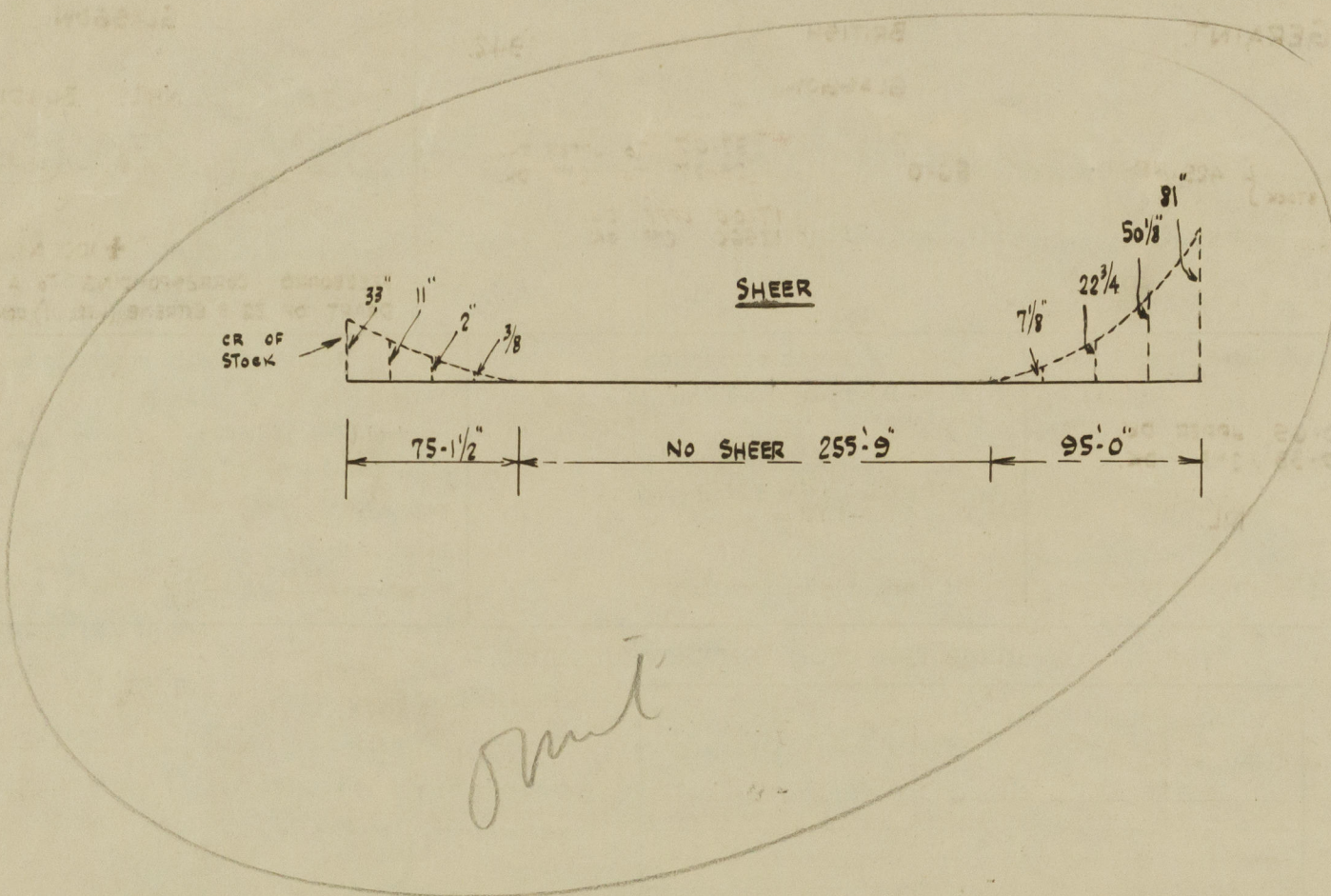
Correction for coefficient $\frac{.68+784}{1.36} = 1.464/1.36$

	+	-
Depth Correction	27.99	-
Deduction for superstructures	-	1.58
Sheer correction	12.99	-
Round of Beam correction	-	.13
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc. to correspond with an extreme summer draught of 26'-9"	632	-
	47.30	1.71
Summer Freeboard =	133.00	+45.59

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"	Tropical Fresh Water Freeboard	9 - 11/4"
Fresh Water Line	7"	Fresh Water	10' - 6 1/4"
Tropical Line	6 3/4"	Tropical	10' - 7 1/4"
Winter Line below	6 3/4"	Winter	11' - 7 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 TRADE

Names of sister ships..... "EMPIRE MORDRED" CHARLES CONNELL & CO LTD. N° 438.

Builder's name and yard number..... CHARLES CONNELL & CO, LTD., N° 439.

Owners..... MINISTRY OF WAR TRANSPORT.

EST. Fee £ 17 : 0 : 0

THIS VESSEL IS OF STANDARD "B" TYPE (PARTIALLY FABRICATED) HAS BEEN BUILT IN ACCORDANCE WITH THE APPROVED PLANS WHICH WERE FORWARDED WITH THE F.E. R.P. FOR THE "EMPIRE MORDRED" EXCEPT THAT DEEP TANKS ARE FITTED AT THE SIDES IN THE HOLDS FORWARD & AT THE SIDES OF THE TUNNEL IN N° 6 HOLD & N°S 2, 3 & 5 HOLDS & TWEEN DECKS ARE INSULATED FOR CARRIAGE OF FROZEN MEAT.