

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR ~~STEAMER~~, ~~SAILING SHIP~~, TANKER.)N^o. 34208

Ship's Name MY. EMPIRE CHANCELLOR	Official Number 180159	Nationality and Port of Registry BRITISH SUNDERLAND	Gross Tonnage 9917	Date of Build 1945	Port of Survey Sunderland
Moulded Dimensions: Length 476.125 Breadth 68.00 Depth 36.00					Date of Survey During Construction
Moulded displacement at moulded draught = 85 per cent. of moulded depth 21467 tons					Surveyor's Signature W. E. Hullar
Coefficient of fineness for use with Tables 76.758					Particulars of Classification +100A1 Carrying Petroleum in Bulk (contemplated)

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth ... 36.00	(a) Where D is greater than Table depth (D - Table depth) R = (36.07 - 31.74) 3 = +12.99	Moulded Breadth (B) 68.00
Stringer plate ... 82.07	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 4.33	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{68 \times 12}{50} = 16.32$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = 17
Depth for Freeboard (D) = 36.07		Difference = .68
		Restricted to ✓
		Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.68}{4} \times .7008 = -.12$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	108.30	108.20	7.5	✓	108.20
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...	34.5	34.5	7.5	✓	34.50
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	142.70	142.70			142.70

Standard Height of Superstructure **7.5'**

„ „ R.Q.D. **✓**

Deduction for complete superstructure **42"**

Percentage covered $\frac{S}{L} =$

„ „ $\frac{S_1}{L} =$ **29.97**

„ „ $\frac{E}{L} =$

Percentage from Table, **Line A Tanker 20.98**
(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 x .2098 = -8.81**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	57.61	1		57.61	45.34	45.75	1		45.75
$\frac{1}{2}$ L from A.P. ...	25.635	4		102.54	20.2	20.50	4		82.00
$\frac{3}{4}$ L „ ...	6.34	2		12.68	5.38	5.375	2		10.75
Amidships ...	-	4		-	0	-	4		-
$\frac{3}{4}$ L from F.P. ...	12.675	2		25.35	6.34	6.75	2		13.50
$\frac{1}{2}$ L „ ...	51.27	4		205.08	26.34	26.75	4		107.00
F.P. ...	115.23	1		115.23	62.	62.00	1		62.00
Total ...				518.49					321.00

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{197.49}{18} (.75 - .1499) = +6.58$

If limited on account of midship superstructure. **✓**

If limited to maximum allowance of 1½ ins. per 100 ft. **✓**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **36.07**

Summer freeboard = **8.08**

Moulded draught (d) = **27.99**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **7"**

Addition for Winter North Atlantic Freeboard (if required) = **7.0 + 4.76 = 11¾"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 19524$

Tons per inch immersion at summer load water line

$T = 65.2$

Deduction = $\frac{\Delta}{40 T}$ inches

= **7.49**

= **7½"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{758 + .68}{1.36} = \frac{1.438}{1.36}$

Depth Correction ... **12.99**

Deduction for superstructures ... **8.81**

Sheer correction ... **6.58**

Round of Beam correction ... **.12**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
12.99	-
-	8.81
6.58	-
-	.12
-	-
-	-
19.57	8.93

Summer Freeboard = **97.05**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ...	14½"	Tropical Fresh Water Freeboard ...	8-1"
Fresh Water Line „ „ ...	7½"	Fresh Water „ „ ...	6-10½"
Tropical Line „ „ ...	7"	Tropical „ „ ...	7-5½"
Winter Line below „ „ ...	7"	Winter „ „ ...	7-6"
Winter North Atlantic Line „ „ ...	11¾"	Winter „ „ ...	8-8"
		Winter North Atlantic „ „ ...	9-0¾"

Empire Cancellor.

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.

Displacement at 28'3" draft = 19547 tons
Tons Per Inch = 65.2.

Equiv. length of poop.

$$\begin{array}{r} 103.79 + \frac{2}{3} \times 6.62 \\ 4.41 \\ \hline 108.20 \end{array}$$

Trade of ship

Names of sister ships

M.V. EMPIRE INVENTOR Sld. Rpt. No. 33766

Builder's name and yard number

Thos. S. James Laing & Son Ltd. Yard No. 756

Owners

Ministry of War Transport

Fee £ 20

Will be charged on F.E.



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Foundation