

Whomant 35515.

Empire Shovel 36467.

Empire Quincey 36614.

Lloyd's Register of Shipping.

Index No.
(For London Office only).

36458

SURVEYS FOR FREEBOARD.

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

Ship's Name EMPIRE GAT	Official Number 168674	Nationality and Port of Registry BRITISH GLASGOW	Gross Tonnage 871 900 850 APPROX.	Date of Build 23/3/48 1940-1	Port of Survey GLASGOW
Moulded Dimensions: Length 199'-1" Breadth 33'-0" Depth 13'-10" (TO CENTRE OF RUDDER STOCK)					Date of Survey WHILST BUILDING
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1522 tons					Surveyor's Signature <i>S.W. Schwell.</i>
Coefficient of fineness for use with Tables .690					Particulars of Classification + 100 A1 (CLASS CONTEMPLATED)

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth	13.83	(a) Where D is greater than Table depth (D - Table depth) R = (13.86 - 13.27) × 1.532 = + .90"		Moulded Breadth (B)	33.0
Stringer plate	.54" .38"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	7.92"
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$.03"			Ship's Round of Beam	9"
Depth for Freeboard (D) =	13.86	If restricted by superstructures		Difference Excess	1.08"
				Restricted to	
				Correction = $\frac{\text{Diff}^*}{4} \times \left(1 - \frac{S_1}{L} \right)$	= $\frac{1.08}{4} \times 1.557 = .07"$

DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Peep enclosed					
overhang					
R.Q.D. enclosed	121.58	3.75	✓	121.58	
overhang	1.83	.91		.91	
Bridge enclosed					
overhang aft					
overhang forward	25.70	7.00	✓	25.70	
File enclosed	21.67				
overhang					
Trunk aft					
forward					
Tonnage opening aft					
forward					
Total	149.11	148.19		148.19	

Standard Height of Superstructure **6.00'**
" " R.Q.D. **3.661'**
Deduction for complete superstructure **25.91"**

Percentage covered $\frac{S}{L} = 74.89$
" " $\frac{S_1}{L} = 74.43$
" " $\frac{E}{L} = 74.43$

Percentage from Table, Line A. and B **68.45**
(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 = **25.91 × .6845 = -17.74"**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	29.91	1		29.91	41.07	34.07	1		34.07
$\frac{1}{2}$ L from A.P.	13.31	4		53.24	14.81	15.16	4		60.64
$\frac{2}{3}$ L	3.29	2		6.58	3.81	3.75	2		7.50
Amidships		4					4		
$\frac{2}{3}$ L from F.P.	6.58	2		13.16	7.31	7.31	2		14.62
$\frac{1}{2}$ L	26.62	4		106.48	29.12	29.12	4		116.48
F.P.	59.82	1		59.82	66.00	66.00	1		66.00
Total				269.19					299.31

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{30.12(-.75-.3744)}{18} = .63"$
If limited on account of midship superstructure. **✓**

Mean actual sheer aft = Excess
Mean standard sheer aft = **3.75**
Mean actual sheer forward = Excess
Mean standard sheer forward = **3.661**
.089" = 1.07"

Length of enclosed superstructure forward of amidships = **.1L**
" " aft of " = **.50L**

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **17.61**
Summer freeboard = **4.21**
Moulded draught (d) = **13.40**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **3.35 = 3 1/4"**Addition for Winter North Atlantic Freeboard (if required) = **5 1/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 1790$

Tons per inch immersion at summer load water line

 $T = 12.81$ Deduction = $\frac{\Delta}{40T}$ inches $= 3 1/2"$ DRAFT EXT. Δ T.P.I.**13.0' 1719 TONS 12.71****14.0' 1872 TONS 12.92**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **.690 + .68 = 1.37/1.36****1.36**Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, soundings, height of

amidships.

Summer Freeboard = **50.57**

SUMMER FREEBOARD amidships from Centre of

Disc to top of Deck Line, Wood, Steel, Deck:

28 JAN 1941

Tropical Fresh Water Line above Centre of Disc **6 3/4"**
Fresh Water Line " **3 1/2"**
Tropical Line " **3 1/4"**
Winter Line below " **3 1/4"**
Winter North Atlantic Line " **5 1/4"**

Tropical Fresh Water Freeboard **4' - 2 1/2"**
Fresh Water **3' - 7 3/4"**
Tropical **3' - 11"**
Winter **3' - 11 1/4"**
Winter North Atlantic **4' - 5 3/4"**
4' - 7 3/4"

10m 3.37. T.

44335

Empire Gat.

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.

Freeboard equivalent bulkhead.

Recess $8' 33'' \times 7' = 4' 30'' =$
 $\frac{13.58}{30.00} =$ total length $=$
 $\frac{15.70}{25.70} =$ equiv endorsed length.
overhang $=$ nil

Trade of ship INTERNATIONAL

Names of ^{similar} ~~other~~ ships "YEWMOUNT" SCOTT & SONS N° 349 (SEE GLS. REPORT N° 60275)

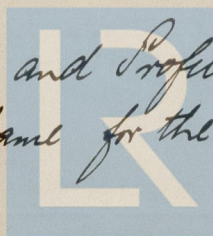
Builder's name and yard number A. & J. INGLIS, LTD, POINTHOUSE N° 1088 G

Owners MINISTRY OF SHIPPING

EST^d Fee £ 8 0 0

A Freeboard Request Form 9 is attached.

Plans of General Arrangement, Approved Midship Section, and Profile & Decks are forwarded for reference; also Plan of Rudder & Sternframe for the similar vessel Harland & Wolff's N° 1092 G



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