

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

MAKEDONIA

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name EMPIRE SQUIRE.	Official Number 168652 507	Nationality and Port of Registry British South Shields.	Gross Tonnage 7046	Date of Build 1941	Port of Survey Newcastle-on-Tyne.
Moulded Dimensions: Length 425.83' Breadth 56.00' Depth 34.64'				Date of Survey During Construction	
Moulded displacement at moulded draught = 85 per cent. of moulded depth 14100 tons				Surveyor's Signature A. Alton	
Coefficient of fineness for use with Tables $\frac{14100 \times 85}{425.83 \times 56 \times 32.02} = .484$ ✓				Particulars of Classification +100A.1 Wld Freeboard (contemplated).	

Depth for Freeboard (D).		Depth correction.		Round of Beam correction.	
Moulded depth ...	34.64'	(a) Where D is greater than Table depth (D - Table depth) R = (34.64 - 28.39) 3 = +24.99		Moulded Breadth (B) 56.00	
Stringer plate05'	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50} = \frac{56 \times 12}{50} = 13.44$ ✓	
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam = 14.00 ✓	
Depth for Freeboard (D) =	34.42'			Difference .56	

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...					
„ overhang ...					
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
Fore enclosed ...	35.66	35.66	6.75	7.5	32.09 ✓
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...	35.66 ✓	35.66			32.09 ✓

Standard Height of Superstructure	4.5'
„ „ R.Q.D.	✓
Deduction for complete superstructure	42.00
Percentage covered $\frac{S}{L} =$	8.34% ✓
„ „ $\frac{S_i}{L} =$	8.34% ✓
„ „ $\frac{E}{L} =$	7.53% ✓
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	8.48%
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	5
Deduction = $42.00 \times .0376 =$	-1.48

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.58	1		52.58	31.00	31.00	1		31.00
$\frac{1}{2}$ L from A.P. ...	23.40	4		93.60	.06	.06	4		.24
$\frac{3}{4}$ L „ ...	5.785	2		11.57	-	-	2		-
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{4}$ L from F.P. ...	11.587	2		23.17	-	-	2		-
$\frac{1}{2}$ L „ ...	14.80	4		18.20	6.33	6.33	4		25.32
F.P. ...	105.187	1		105.187	81.00	81.00	1		81.00
Total ...				443.22					137.56

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{335.76}{18} \times .7082 = +13.21$ ✓

If limited on account of midship superstructure.

Mean actual sheer aft = **Deficient** ✓
Mean standard sheer aft =

Mean actual sheer forward = **Deficient** ✓
Mean standard sheer forward =

Length of enclosed superstructure forward of amidships = ✓
„ „ aft of „ = ✓

Sheer parallel to base line from frame 30 to frame 129

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 = **34.42'**
Summer freeboard = **1.08'**
Moulded draught (d) = **26.64'**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **6.66' = 6¾'**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 13960$ tons ✓

Tons per inch immersion at summer load water line

T = **44.2** ✓Deduction = $\frac{\Delta}{40T}$ inches= $\frac{13960}{40 \times 44.2} = 7.04 = 7$ ✓

40 × 44.2

TABULAR FREEBOARD

Correction for coefficient $\frac{68+7784}{1.36} = \frac{1.464}{1.36}$ Depth Correction ... **24.99**Deduction for superstructures ... **-1.48**Sheer correction ... **13.21**Round of Beam correction ... **-13.5**Correction for Thickness of Deck amidships ... **6.12**Other corrections/scantlings, etc. to correspond ... **8.45**Summer Freeboard = **133.40**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck.

Tropical Fresh Water Line above Centre of Disc **349.44' 13¾'**
Fresh Water Line „ „ **178.17' 13¾'**
Tropical Line „ „ **171.17' 13¾'**
Winter Line below „ „ **171.17' 13¾'**
Winter North Atlantic Line „ „ **171.17' 13¾'**

Tropical Fresh Water Freeboard ... **3378' 11-12\"**
Fresh Water „ „ **3029' 9-11\"**
Tropical „ „ **3200' 10-6\"**
Winter „ „ **3207' 10-6\"**
Winter North Atlantic „ „ **3549' 11-8\"**

9 DEC 1941

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.

Designed draught = 26' 9" extreme
 Less ~~Less~~ ^{84.65 = 1.45"} ~~Less~~ ^{1.34} ^{1 1/2"}
 and gearboard 26' 7 1/2"

Est. Draught.	Est. Displacement	T.P.I.
28'-0	14400 Tons.	49.8
26'-9	13960 -	49.2
26'-0	13520 -	48.9.

Survey

Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....

Partially Fabricated B Type Standard Vessel.

J. Readhead & Son Ltd. No 525.

Ministry of War Transport.

To be charged with first entry



© 2021

Lloyd's Register
Foundation