

Lloyd's Register of Shipping.

Index. No. **38271**

(For London Office only).

MAY 13 1937

SURVEYS FOR FREEBOARD.

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

GRK REPORT N° 20364

Ship's Name "SERENITY"	Official Number 165499	Nationality and Port of Registry BRITISH, LONDON	Gross Tonnage (APPROX.) 490 487.43	Date of Build UNDER CONSTRUCTION	Port of Survey GREENOCK
Moulded Dimensions: Length 156' 0" ✓ Breadth 27' 5" ✓ Depth 10' 7 1/2" ✓ To UPP. DECK ✓ 14' 13" ✓ R.Q. DECK ✓					Date of Survey DURING CONSTRUCTION
Moulded displacement at moulded draught = 85 per cent. of moulded depth (9' 1") 817 ✓ tons (T.P.I. 8.33)					Surveyor's Signature R. H. Scott
Coefficient of fineness for use with Tables .732 ✓					Particulars of Classification * 100 A 1 (CONTEMPLATED.)

Depth for Freeboard (D). Moulded depth ... 10' 7 1/2" ✓ Stringer plate ... 38" ✓ .031 ✓ Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓ Depth for Freeboard (D) = 10' 4 1/4" ✓	Depth correction. (a) Where D is greater than Table depth (D - Table depth) R = $(10' 7 1/2" - 10' 4 1/2") 1.20 = + .41"$ ✓ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = ✓ If restricted by superstructures ✓	Round of Beam correction. Moulded Breadth (B) 27' 6" Standard Round of Beam = $\frac{B \times 12}{50} =$ 6' 60" Ship's Round of Beam = 7' ✓ Difference Express = .40" Restricted to Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.40^2}{4} \times .2618 = -.01$.03
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	97.75	98.92	3' 42"	✓	98.92
" overhang (SEE SKETCH) 98.92					
Bridge enclosed ...	✓				
" overhang aft ...	✓				
" overhang forward ...	✓				
F'cle enclosed ...	16.25 ✓	16.25	7' 0"	✓	16.25
" overhang ...	✓				
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward ...	✓				
Total ...	115.14	115.14			115.14

Standard Height of Superstructure **6' 00"** ✓
 " " R.Q.D. **3' 37 1/2"** ✓
 Deduction for complete superstructure **21' 60"** ✓
 Percentage covered $\frac{S}{L} =$ **.7382** ✓
 " $\frac{S_1}{L} =$ **.7382** ✓
 " $\frac{E}{L} =$ **.7382** ✓
 Percentage from Table, Line A. **67.40** ✓
 (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 = **21' 60" x .674 = 14' 62"** ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	25.60	1	25.60	30.5	31.06	1	31.06
1/4 L from A.P. ...	11.39	4	45.56	13.25	13.82	4	55.28
1/2 L " ...	2.82	2	5.64	2.25	2.81	2	5.62
Amidships ...	-	4	-	-	-	4	-
3/4 L from F.P. ...	5.63	2	11.26	9.0	9.00	2	18.00
1/4 L " ...	22.78	4	91.12	30.0	30.00	4	120.00
F.P. ...	51.20	1	51.20	61.5	61.50	1	61.50
Total ...			230.38				291.46

Mean actual sheer aft = **Express** ✓
 Mean standard sheer aft = **Express** ✓
 Mean actual sheer forward = **Express** ✓
 Mean standard sheer forward = **Express** ✓
 Length of enclosed superstructure forward of amidships = **> .1L** ✓
 " " aft of " = **> .1L** ✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{61.08}{18} (.75 - .3691) = -1.29$ ✓
 If limited on account of midship superstructure. ✓
 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.

RAISED QUARTER
 Depth to Freeboard Deck = **14' 16"**
 Summer freeboard = **3' 58"**
 Moulded draught (d) = **10' 58"**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **2' 65" = 2' 3 3/4"**

Addition for Winter North Atlantic Freeboard (if required) = **2' 3 3/4" + 2" = 4' 3 3/4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta =$ **979 @ 10' 5 1/2"** ✓
 Tons per inch immersion at summer load water line
 $T =$ **8.30 @ 8' 0 1/4"** ✓
 $8.33 @ 9' 1"$ **8.37**
 Deduction = $\frac{\Delta}{40T}$ inches
 $= \frac{979}{40 \times 8.37} = 2.92 = 3"$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient	$\frac{.732 + .68}{1.36} = \frac{1.412}{1.36}$	
Depth Correction41
Deduction for superstructures	...	14' 62"
Sheer correction	...	1' 29"
Round of Beam correction01
Correction for HEIGHT OF RAISED QUARTER	...	41' 00"
Other corrections, scantlings, etc.	...	4
	41' 41"	15' 9 1/2"
		+ 25' 4 1/4"
		Summer Freeboard = 42' 46 1/4"

Raised Quarter

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

Tropical Fresh Water Line above Centre of Disc	...	3"	Tropical Fresh Water Freeboard	...	3' 4" limited
Fresh Water Line	"	3"	Fresh Water	"	3' 4"
Tropical Line	"	NIL	Tropical	"	3' 7" limited
Winter Line	below	2' 3 3/4"	Winter	"	3' 9 3/4"
Winter North Atlantic Line	"	4' 3 3/4"	Winter North Atlantic	"	3' 11 3/4"

19 MAY 1937

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.

King's Register of Shipping
SURVEYOR'S BOOK FOR FREEBOARD
(COMPUTATION FOR SHIP'S FREEBOARD)

Name of ship		Serenity	
Builder's name and yard number		George Brown & Co. (Marine) Ltd. Yard No. 201	
Owners		F.T. Everard & Sons, Ltd.	
Trade of ship		International	
Names of sister ships		"Signality" (Yard No. 202 - Now Building)	
Fee £		6 : 0 : 0	

DESCRIPTION FOR SUBSTITUTION

Name of ship		Serenity	
Builder's name and yard number		George Brown & Co. (Marine) Ltd. Yard No. 201	
Owners		F.T. Everard & Sons, Ltd.	
Trade of ship		International	
Names of sister ships		"Signality" (Yard No. 202 - Now Building)	
Fee £		6 : 0 : 0	

SHIP'S CORRECTION

Name of ship		Serenity	
Builder's name and yard number		George Brown & Co. (Marine) Ltd. Yard No. 201	
Owners		F.T. Everard & Sons, Ltd.	
Trade of ship		International	
Names of sister ships		"Signality" (Yard No. 202 - Now Building)	
Fee £		6 : 0 : 0	

Trade of ship INTERNATIONAL

Names of sister ships "SIGNALITY" (YARD No. 202 - NOW BUILDING)

Builder's name and yard number GEORGE BROWN & CO. (MARINE) LTD. YARD No. 201

Owners F.T. EVERARD & SONS, LTD.

Fee £ 6 : 0 : 0

(APPROX.)



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