

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name LARGS BAY	Official Number 137225	Nationality and Port of Registry BRITISH LONDON.	Gross Tonnage 14182	Date of Build 1921 12 MS.	Port of Survey _____
Moulded Dimensions: Length 529.33 Breadth 68.00 Depth 43.50					Date of Survey 8th Feb. 1949.
Moulded displacement at moulded draught = 85 per cent. of moulded depth 29540 tons					Surveyor's Signature _____
Coefficient of fineness for use with Tables .776.					Particulars of Classification +100 A1 Shell & with freeboard.

DEPTH FOR FREEBOARD (D). Moulded depth 43.50 Stringer plate08 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = 25 \times 4061 \checkmark$.10 Depth for Freeboard (D) = 43.68	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = (43.68 - 35.80) 3 = +25.14" 8.38 (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) 68.00 Standard Round of Beam = $\frac{B \times 12}{50} = 16.32$ Ship's Round of Beam = 6. Difference 10.32 Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{10.32}{4} \times 43.57 = +11.12$
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DEDUCTION FOR SUPERSTRUCTURES.				
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Effective Length (E)
Poop enclosed				
" overhang				
R.Q.D. enclosed				
" overhang				
Bridge enclosed	205.33	205.33	8.0	205.33
" overhang aft				
" overhang forward				
Fore enclosed Equipped	77.64	77.64	8.0	77.64
" overhang	31.37	15.69		15.69
Trunk aft				
" forward				
Tonnage opening aft				
" " forward				
Total	314.34	298.66		298.66

Standard Height of Superstructure 7.50
" " R.Q.D. ✓
Deduction for complete superstructure 42.00
Percentage covered $\frac{S}{L} = 59.39. \checkmark$
" " $\frac{S_1}{L} = 56.43. \checkmark$
" " $\frac{E}{L} =$
Percentage from Table, Line A. ✓
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. 42.43
(corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required) ✓
Deduction = 42.00 x .4243 = 17.82."

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	62.93	1	62.93	60.00	60.00	1	60.00
$\frac{1}{8}$ L from A.P.	28.00	4	112.00	27.65	27.65	4	110.60
$\frac{2}{8}$ L "	6.92	2	13.84	6.91	6.91	2	13.82
Amidships	-	4	-	-	-	4	-
$\frac{2}{8}$ L from F.P.	13.84	2	27.68	13.03	13.03	2	26.06
$\frac{1}{8}$ L "	56.00	4	224.00	52.14	52.14	4	208.56
F.P.	126.86	1	126.86	120.00	120.00	1	120.00
Total			566.31				539.04

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

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

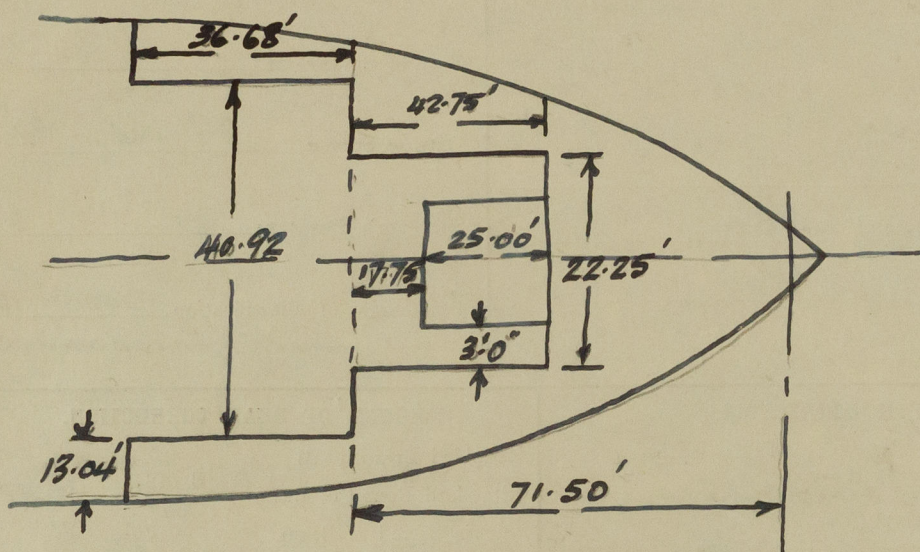
Length of enclosed superstructure forward of amidships = **✓**
" " aft of " = **✓**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{27.27 (.75 - .2969)}{18} = +.69. \checkmark$
If limited on account of midship superstructure. **✓** If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. **✓**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 43.58 Summer freeboard = 10.69 Moulded draught (d) = 32.89 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 8.22 = 8$\frac{1}{4}$" Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 26030$ Tons per inch immersion at summer load water line $T = 73.40$ Deduction = $\frac{\Delta}{40 T}$ inches = 8.87 = 8$\frac{3}{4}$"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.776 + .68}{1.36} = \frac{1.456}{1.36}$ <table border="1"> <tr> <th></th> <th>+</th> <th>-</th> </tr> <tr> <td>Depth Correction</td> <td>25.14</td> <td>-</td> </tr> <tr> <td>Deduction for superstructures</td> <td>17.82</td> <td>-</td> </tr> <tr> <td>Sheer correction</td> <td>.69</td> <td>-</td> </tr> <tr> <td>Round of Beam correction</td> <td>1.12</td> <td>-</td> </tr> <tr> <td>Correction for Thickness of Deck amidships</td> <td>-</td> <td>1.20</td> </tr> <tr> <td>Other corrections, scantlings, etc. to correct with a summer moulded draught of 32.89'</td> <td>1.90</td> <td>-</td> </tr> <tr> <td></td> <td>28.85</td> <td>19.02</td> </tr> </table> Summer Freeboard = 128.35		+	-	Depth Correction	25.14	-	Deduction for superstructures	17.82	-	Sheer correction69	-	Round of Beam correction	1.12	-	Correction for Thickness of Deck amidships	-	1.20	Other corrections, scantlings, etc. to correct with a summer moulded draught of 32.89'	1.90	-		28.85	19.02
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood Steel Deck :-			
Tropical Fresh Water Line above Centre of Disc	17"	Tropical Fresh Water Freeboard	10$\frac{1}{8}$"
Fresh Water Line " "	8$\frac{3}{4}$"	Fresh Water " "	9$\frac{1}{8}$"
Tropical Line " "	8$\frac{1}{4}$"	Tropical " "	10$\frac{1}{2}$"
Winter Line below " "	8$\frac{1}{4}$"	Winter " "	11$\frac{1}{2}$"
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.



Forecastle: - 108.18'

$$\text{Recesses: } - 36.68 \times 40.92 = 1500.95$$

$$17.75 \times 22.25 = 394.94$$

$$25.00 \times 6.00 = 150.00$$

$$\underline{2045.89}$$

$$\frac{2045.89}{67} = 30.54'$$

$$\text{Equivalent width} = 108.18' - 30.54' = 77.64'$$

$$\text{Length} = 30.54 + 0.83' = 31.37'$$

Trade of ship _____

Names of sister ships _____

Builder's name and yard number _____

Owners _____

Fee £ _____



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Foundation