

Marietta E, 36032.
Lulworth Hill, 36308.
Penbridge Hill, 36438.

Index. No. 36377.
(For London Office only).

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name RICHMOND HILL	Official Number 168042	Nationality and Port of Registry British London.	Gross Tonnage 7579	Date of Build 1940	Port of Survey Sunderland
Moulded Dimensions: Length 415.54' Breadth 60.16' Depth 38.25' to centre of rudder stock					Date of Survey Whilst building
Moulded displacement at moulded draught = 85 per cent. of moulded depth 17393 tons					Surveyor's Signature Jas. L. Rennie
Coefficient of fineness for use with Tables .749					Particulars of Classification + 100 A1 with freeboard (completed)

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 38.25	(a) Where D is greater than Table depth (D - Table depth) R = (38.30 - 27.70) × 3 = + 31.80"	Moulded Breadth (B) 60.16'
Stringer plate05	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = 10.60	Standard Round of Beam = $\frac{B \times 12}{50} = \mathbf{14.44"}\mathbf{}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ ✓	If restricted by superstructures ✓	Ship's Round of Beam = 15.80"
Depth for Freeboard (D) = 38.30		Difference .56"
		Restricted to
		Correction = $\frac{\text{Diff.}}{4} \times \left(1 - \frac{S_1}{L} \right) = \mathbf{\frac{.56}{4} = -.14"}\mathbf{}$

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 ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...					
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...					
„ „ forward ...					
Total ...					

Flush-decked

Standard Height of Superstructure _____

„ „ R.Q.D. _____

Deduction for complete superstructure _____

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

„ „ $\frac{S_1}{L} =$ _____

„ „ $\frac{E}{L} =$ _____

Percentage from Table, Line A.
(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 = **Nil.**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.55	1		51.55	72.00	72.00	1		72.00
1/4 L from A.P. ...	22.94	4		91.76	31.00	31.00	4		124.00
1/2 L „ ...	5.67	2		11.34	5.75	5.75	2		11.50
Amidships ...	-	4		-	-	-	4		-
3/4 L from F.P. ...	11.34	2		22.68	10.25	10.25	2		20.50
1/4 L „ ...	45.88	4		183.52	63.75	63.75	4		255.00
F.P. ...	103.11	1		103.11	144.00	144.00	1		144.00
Total ...				463.96					627.00

Mean actual sheer aft = **Excess**
Mean standard sheer aft = _____

Mean actual sheer forward = **Excess**
Mean standard sheer forward = _____

Length of enclosed superstructure forward of amidships = **Flush Deck.**
„ „ aft of „ = **Flush Deck.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \mathbf{\frac{163.04}{18} \times .75 = -6.79"}\mathbf{}$
If limited on account of midship superstructure. **✓**

If limited to maximum allowance of 1 1/2 ins. per 100 ft. **-6.23"**

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 38.30 Summer freeboard = 10.25 Moulded draught (d) = 28.05 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 7.01 = 7" Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = \mathbf{14740}$ Tons per inch immersion at summer load water line T = 50.1 Deduction = $\frac{\Delta}{40T}$ inches = 7.35 = 7 1/4"	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.68 + .749}{1.36} = \mathbf{1.429/1.36}$ <table border="1"> <tr><td></td><td>+</td><td>-</td></tr> <tr><td>Depth Correction</td><td>31.80</td><td>-</td></tr> <tr><td>Deduction for superstructures</td><td>-</td><td>6.23</td></tr> <tr><td>Sheer correction</td><td>-</td><td>.14</td></tr> <tr><td>Round of Beam correction</td><td>-</td><td>-</td></tr> <tr><td>Correction for Thickness of Deck amidships</td><td>-</td><td>-</td></tr> <tr><td>Other corrections, scantlings, etc. to correspond to summer moulded draught of 28'-0 1/2"</td><td>10.78</td><td>-</td></tr> <tr><td>Summer Freeboard</td><td>42.58</td><td>6.37</td></tr> <tr><td></td><td>+ 36.21</td><td>-</td></tr> <tr><td></td><td>123.00</td><td>-</td></tr> </table>		+	-	Depth Correction	31.80	-	Deduction for superstructures	-	6.23	Sheer correction	-	.14	Round of Beam correction	-	-	Correction for Thickness of Deck amidships	-	-	Other corrections, scantlings, etc. to correspond to summer moulded draught of 28'-0 1/2"	10.78	-	Summer Freeboard	42.58	6.37		+ 36.21	-		123.00	-
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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 ...	14 1/4"	Tropical Fresh Water Freeboard ...	10'-3"
Fresh Water Line " " ...	7 1/4"	Fresh Water " " ...	9'-0 3/4"
Tropical Line " " ...	7"	Tropical " " ...	9'-7 3/4"
Winter Line below " " ...	7"	Winter " " ...	9'-8"
Winter North Atlantic Line " " ...	✓	Winter North Atlantic " " ...	10'-10"