

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

G.R. REPORT No 20869

Ship's Name <b>MARIHORA</b> <b>TEMPLE ARCH</b>	Official Number <b>167384</b>	Nationality and Port of Registry <b>BRITISH</b> <b>LONDON.</b>	Gross Tonnage <b>5147</b> <b>APPROX</b> <b>5138-19</b> <b>5200</b>	Date of Build <b>1939</b>	Port of Survey <b>GREENOCK</b>
Moulded Dimensions: Length <b>425'</b> Breadth <b>56</b> Depth <b>36.75 To Upper Deck</b> <b>27.75 To 2<sup>nd</sup></b>				Date of Survey <b>While Building</b>	
Moulded displacement at moulded draught = 85 per cent. of moulded depth <b>11972.</b> tons				Surveyor's Signature <b>Kenneth Inglis</b>	
Coefficient of fineness for use with Tables <b>.747</b>				Particulars of Classification <b>+100 A.I.</b> <b>WITH FREEBOARD (CONTEMPLATED)</b>	

<b>Depth for Freeboard (D).</b> Moulded depth ... <b>27.75</b> Stringer plate ... <b>1.40</b> <b>.60</b> <b>.03</b> <del>2 1/2" Wood Apr. of Frame 18</del> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <b>27.78</b>	<b>Depth correction.</b> (a) Where D is greater than Table depth (D - Table depth) R =  (b) Where D is less than Table depth (if allowed) (Table depth - D) R = <b>(28.33 - 27.78) 3 = -1.65</b> If restricted by superstructures	<b>Round of Beam correction.</b> Moulded Breadth (B) <b>56'-0"</b> Standard Round of Beam = $\frac{B \times 12}{50} = 13.44$ Ship's Round of Beam = <b>14"</b> Difference <b>Excess</b> = <b>.56</b> Restricted to Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.56}{4} \times (1 - .9939) = .016$
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## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	42.14	42.14	9'-0"		42.14	Standard Height of Superstructure <b>7.50</b>
.. overhang ...	✓					.. R.Q.D.
R.Q.D. enclosed ...	✓					Deduction for complete superstructure <b>42.00</b>
.. overhang ...	✓					Percentage covered $\frac{S}{L} = 100.00$
Bridge enclosed...	377.70	377.70	9'-0"		377.70	.. $\frac{S_1}{L} = 99.40$
.. overhang aft ...	✓					.. $\frac{E}{L} = 99.40$
.. overhang forward	✓					Percentage from Table, Line A. ✓
Fore enclosed ...	✓					(corrected for absence of forecastle (if required)) ✓
.. overhang ...	✓					Percentage from Table, Line B. <b>99.26</b>
.. overhang aft ...	✓					(corrected for absence of forecastle (if required)) ✓
.. forward ...	✓					Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...	5.16	2.58	9'-0"		2.58	Deduction = <b>42.00 - .9926 = -41.69</b>
.. forward	✓					
Total ...	425.00	422.42			422.42	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	52.50	1		52.50	54	72.00	1		72.00
1/4 L from A.P. ...	23.36	4		93.44	24	32.04	4		128.16
3/4 L ..	5.78	2		11.56	6	7.92	2		15.84
Amidships ...	-	4		-	0	-	4		-
3/4 L from F.P. ...	11.56	2		23.12	12	13.86	2		27.72
1/4 L ..	46.72	4		186.88	48	56.07	4		224.28
F.P. ...	105.00	1		105.00	108	126.00	1		126.00
Total ...				472.50	+18				594.00

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{21} \right) = \frac{121.50}{18} \times 25 = -1.69$   
If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Depth to Freeboard Deck = <b>27.80</b> Summer freeboard = <b>3.21</b> Moulded draught (d) = <b>24.59</b> Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <b>6.15 = 6 1/4"</b> Addition for Winter North Atlantic Freeboard (if required) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta = 25' - 12230$ $\Delta = 25' - 12802$ Tons per inch immersion at summer load water line $T = 24' - 47.33$ $T = 25' - 47.67$ Deduction = $\frac{\Delta}{40T}$ inches <b>= 6 3/4"</b>	<b>TABULAR FREEBOARD</b> corrected for Flush Deck (if required) Correction for coefficient $\frac{747.68}{1.36} = \frac{1.427}{1.36}$ Depth Correction ... <b>1.65</b> Deduction for superstructures ... <b>41.69</b> Sheer correction ... <b>1.69</b> Round of Beam correction ... Correction for Thickness of Deck amidships ... <b>24</b> Other corrections, scantlings, etc. ... <b>24 45.03 = 44.79</b> Summer Freeboard = <b>38.47</b>
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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 ...	13"
Fresh Water Line " " ...	6 3/4"
Tropical Line " " ...	6 1/4"
Winter Line below " " ...	6 1/4"
Winter North Atlantic Line " " ...	...

Tropical Fresh Water Freeboard ...	2 1/2"
Fresh Water " " ...	2 7/8"
Tropical " " ...	2 8/8"
Winter " " ...	3 1/8"
Winter North Atlantic " " ...	...

20 DEC 1939



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.

Trade of ship INTERNATIONAL.  
Names of sister ships S.S. GLENPARK. GREENOCK FREEBOARD REPORT NO 20817  
Builder's name and yard number LITHGOWS LTD NO 929.  
Owners TEMPLE STEAMSHIP CO LTD, (LAMBERT BROS MARS) LONDON

APPROX Fee £ 16 0 0  
To BE RENDERED WITH FIRST ENTRY.



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