

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

(COMPUTATION FOR STEAMER, ~~SAILING SHIP~~, ~~TANKER~~)
 Received
 Index No.
 Govt. Copy
 Owners C11

Ship's Name MARISA	Official Number	Nationality and Port of Registry Brazilian Rio de Janeiro	Gross Tonnage 4250	Date of Build 1930-4	Port of Survey
Moulded Dimensions: Length 112.17 m Breadth 15.90 m Depth 8.394 m					Date of Survey 1/3/60
Freeboard Length					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing)					Particulars of Classification + 100 A1
Coefficient of fineness for use with Tables .772					

DEPTH FOR FREEBOARD (D).	DEPTH CORRECTION.	ROUND OF BEAM CORRECTION.
Moulded depth 8.394	(a) Where D is greater than Table depth (D - Table depth) R = 8.33(8.403 - 7.478)28.33 = + 218 mm	Moulded Breadth (B) 15.90 m
Stringer plate009	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = .925	Standard Round of Beam = $\frac{B \times 100}{50} =$ 318 mm
Wood Sheathing on exposed deck		Ship's Round of Beam = 318 mm
$T \left(\frac{L-S}{L} \right) =$		Difference
Depth for Freeboard (D) = 8.403	If restricted by superstructures	Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) =$ Nil

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	14.655	14.655	2.381		14.655
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	68.860	68.860	2.438		68.860
" overhang aft					
" overhang forward					
F'cle enclosed	8.406	8.406	2.362		8.406
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total	91.921	91.921			91.921

Standard Height of Superstructure **2.192**

" " R.Q.D. **1**

Deduction for complete superstructure **1013 mm**

Percentage covered $\frac{S}{L} =$ **81.95**

" " $\frac{S_1}{L} =$ **81.95**

" " $\frac{E}{L} =$ **81.95**

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **77.72**
(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = **1013 x .7772 = - 787 mm**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	1189	1	1189	1829	1829	1	1829
$\frac{1}{4}$ L from A.P.	529	4	2116	796	796	4	3184
$\frac{3}{8}$ L "	131	2	262	199	199	2	398
Amidships	0	4	0	0	0	4	0
$\frac{3}{8}$ L from F.P.	262	2	524	357	357	2	714
$\frac{1}{4}$ L "	1058	4	4232	1429	1429	4	5716
F.P.	2377	1	2377	3302	3302	1	3302
Total			10700				15143

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{10700}{48} =$ **222.92**

If limited on account of midship superstructure.

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

" " aft of " =

$\frac{4443}{18} \times \left(.75 - \frac{.3403}{.4097} \right) =$ **84 mm**

If limited to maximum allowance of 1½ ins. per 100ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **8.403**

Summer freeboard = **1.022**

Moulded draught (d) = **7.381**

Keel allowance =

Extreme draught =

Deduction for Tropical freeboard and addition for =

Winter freeboard = $\frac{d}{48} =$ **154**

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line $\Delta =$ **10359**

Tons per inch immersion at summer load water line $T =$ **37.67**

Deduction = $\frac{\Delta}{40 T}$ inches = **6.87"** = **174 mm**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.68 + .772}{1.36} =$ **1452/1.36**

Depth Correction **218**

Deduction for superstructures **787**

Sheer correction **84**

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

1569

1675

218 **871** **- 653**

Summer Freeboard = **1022 mm**SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	328 mm
Fresh Water Line " "	174 mm
Tropical Line " "	154 mm
Winter Line below " "	154 mm
Winter North Atlantic Line " "	154 mm

Tropical Fresh Water Freeboard **694 mm**

Fresh Water " " **848 mm**

Tropical " " **868 mm**

Winter " " **1176 mm**

Winter North Atlantic " "

22 MAR 1960