

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Report No. 5108

Ship's Name "RIO DOURO" (was to be named "RIO VOGA") ex LST 3039	Official Number	Nationality and Port of Registry Brazilian	Gross Tonnage 4032.27	Date of Build	Port of Survey Rio de Janeiro
Moulded Dimensions: Length 324' 20" Breadth 54' Depth 27' <i>To L of R.S.</i>					Date of Survey 1st October 1951
Moulded displacement at moulded draught = 85 per cent. of moulded depth _____ tons					Surveyor's Signature <i>M. Caldwell</i>
Coefficient of fineness for use with Tables 91. ASSUMED					Particulars of Classification A- for service between Trinidad and River Plate

DEPTH FOR FREEBOARD (D). Moulded depth 27.0 Stringer plate031 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 27.03	DEPTH CORRECTION. (a) Where D is greater than Table depth (D - Table depth) R = $(27.03 - 21.61) 2.494 = +18.52$ (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures <input checked="" type="checkbox"/>	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 54.00 Standard Round of Beam = $\frac{B \times 12}{50} = 12.96$ Ship's Round of Beam = NIL Difference 12.96 Restricted to Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{12.96}{4} = +3.24$
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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					
" overhang		n o n e			
Bridge enclosed					
" overhang aft					
" overhang forward					
F'ele enclosed					
" overhang					
Trunk aft					
" forward					
Tonnage opening aft					
" " forward					
Total					

Standard Height of Superstructure _____

" " R.Q.D. _____

Deduction for complete superstructure _____

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

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

" " $\frac{E}{L} =$ _____

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.	42.42	1	42.42	30"	30.	1	30.00
$\frac{1}{4}$ L from A.P.	18.88	4	75.52	13	13.	4	52.00
$\frac{2}{8}$ L "	4.665	2	9.33		✓	2	✓
Amidships	✓	4	✓		✓	4	✓
$\frac{2}{8}$ L from F.P.	9.33	2	18.66		✓	2	✓
$\frac{1}{4}$ L "	37.75	4	151.00	0	✓	4	✓
F.P.	84.84	1	84.84	42"	42.	1	42.00
Total							124.00

Mean actual sheer aft = _____

Mean standard sheer aft = _____

Mean actual sheer forward = _____

Mean standard sheer forward = _____

DEFICIENT.

Length of enclosed superstructure forward of amidships = _____

" " aft of " = _____

DEFICIENT.

SHEER.

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{257.77}{18} (.75 - \frac{1}{2}) = +10.74$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 27.03 Summer freeboard = 11.02 Moulded draught (d) = 16.01 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 4.00 Addition for Winter North Atlantic Freeboard (if required) = ✓	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line $T =$ Deduction = $\frac{\Delta}{40 T}$ inches $\frac{4}{4} = 1$	TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{49.49 + 4.86}{1.36} = \frac{1.59}{1.36}$ <table border="1"> <tr> <th></th><th>+</th><th>-</th></tr> <tr> <td>Depth Correction</td><td>13.52</td><td>✓</td></tr> <tr> <td>Deduction for superstructures</td><td>✓</td><td>✓</td></tr> <tr> <td>Sheer correction</td><td>10.74</td><td>✓</td></tr> <tr> <td>Round of Beam correction</td><td>3.24</td><td>✓</td></tr> <tr> <td>Correction for Thickness of Deck amidships</td><td>✓</td><td>✓</td></tr> <tr> <td>Other corrections, scantlings, etc.</td><td>14.20</td><td>✓</td></tr> <tr> <td>Summer Freeboard</td><td>68.70</td><td>✓</td></tr> </table>		+	-	Depth Correction	13.52	✓	Deduction for superstructures	✓	✓	Sheer correction	10.74	✓	Round of Beam correction	3.24	✓	Correction for Thickness of Deck amidships	✓	✓	Other corrections, scantlings, etc.	14.20	✓	Summer Freeboard	68.70	✓	54.35 63.55 22.11.51 +68.70 132.25
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Summer Freeboard	68.70	✓																									

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

Tropical Fresh Water Line above Centre of Disc	8"	Tropical Fresh Water Freeboard	11'-0"
Fresh Water Line " "	7"	Fresh Water " "	10'-4"
Tropical Line " "	4"	Tropical " "	10'-8"
Winter Line below " "	Not Assigned	Winter " "	Not Assigned
Winter North Atlantic Line " "	Not Assigned	Winter North Atlantic " "	Not Assigned

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 Coastwise - Brazil

Names of sister ships RIO MINHO, RIO TEJO and RIO MONDEGO.

Builder's name and yard number Fairfield SB & Eng. Co. - J 11725

Owners E.G.Fontes & Co.Ltd.

Fee £ 13.000,00 (To be charged with the Hull, Machinery and Electrical Fees)



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Foundation