

Preliminary C.S.D.

For LONDON OFFICE ONLY

LLOYD'S REGISTER OF SHIPPING

SURVEYS FOR FREEBOARD

SOUTH AMERICA

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

Ship's Name ex "Rio Teuco"	Official Number	Nationality and Port of Registry	Gross Tonnage	Date of Build	Port of Survey LONDON H.Q.
Moulded Dimensions: Length 422.04' Breadth 56.67' Depth 36.88'					Date of Survey 27.12.63
Freeboard Length 422.04' + 0.56' = 422.60' To CL of Rudder					Surveyor's Signature
Moulded displacement at moulded draught = 85 per cent. of moulded depth (excluding bossing) .785 tons					Particulars of Classification +100.91 WITH FREEBOARD.
Coefficient of fineness for use with Tables					

DEPTH FOR FREEBOARD (D).		DEPTH CORRECTION.		ROUND OF BEAM CORRECTION.	
Moulded depth	36.88	(a) Where D is greater than Table depth (D-Table depth) R = (36.93 - 28.17) 3 = 26.28"		Moulded Breadth (B)	56.67
Stringer plate	.62	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	13.60
Wood Sheathing on exposed deck				Ship's Round of Beam	14.00
$T \left(\frac{L-S}{L} \right) =$				Difference	0.40
Depth for Freeboard (D) =	36.93	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.4}{4} \times .9281 = -0.09$	

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				
" overhang aft				
" overhang forward				
F'cle enclosed	30.39	30.39	7.50	30.39
" overhang				
Trunk aft				
" forward				
Tonnage opening aft				
" forward				
Total	30.39	30.39		30.39

Standard Height of Superstructure **7.50'**

" " R.Q.D. **-**

Deduction for complete superstructure **42.00"**

Percentage covered $\frac{S}{L} =$ **7.19**

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

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

Percentage from Table, Line A. **3.60**

(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 = **42.00 x .0260 = -1.51**

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	Product
A.P.	52.26	1		52.26	62.00	62.00	62.00
$\frac{1}{2}$ L from A.P.	23.25	4		93.00	27.37	27.37	109.48
$\frac{1}{2}$ L	5.75	2		11.50	7.38	7.38	14.76
Amidships	0	4		0	0	0	0
$\frac{1}{2}$ L from F.P.	11.50	2		23.00	13.50	13.50	27.00
$\frac{1}{2}$ L	46.51	4		186.04	53.50	53.50	214.00
F.P.	104.52	1		104.52	121.61	121.61	121.61
Total				470.32			548.85

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 " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{78.53}{18} \times (.75 - .036) = -3.12$ But no allowance

If limited on account of midship superstructure. **YES - NIL**

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100ft.

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	80.39
Addition for Winter and Winter North Atlantic Freeboard.		Correction for coefficient $\frac{.785 + .68}{1.36} = 1.435/1.36$	84.82
Depth to Freeboard Deck = 36.93	Displacement in salt water at summer load water line		
Summer freeboard = 9.13	$\Delta =$		
Moulded draught (d) = 27.80	Tons per inch immersion at summer load water line		
Keel allowance =	T =		
Extreme draught =	Deduction = $\frac{\Delta}{40 T}$ inches		
Deduction for Tropical freeboard and addition for =			
Winter freeboard = $\frac{d}{4}$ inches =			
Addition for Winter North Atlantic Freeboard (if required) =			

Depth Correction ... **26.28**

Deduction for superstructures ... **1.51**

Sheer correction ... **0.09**

Round of Beam correction ... **0.09**

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

26.28 1.60 + 24.68

Summer Freeboard = **109.50**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Water, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	...	Tropical Fresh Water Freeboard	...
Fresh Water Line	"	Fresh Water	"
Tropical Line	"	Tropical	"
Winter Line below	"	Winter	"
Winter North Atlantic Line	"	Winter North Atlantic	"

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