

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Index. No.
(For London Office only.)

MAR 1953

Ship's Name M. V. "RIO ESCONDIDO" (BC)	Official Number	Nationality and Port of Registry Nicarguan <i>Carinto</i>	Gross Tonnage 1323	Date of Build	Port of Survey NEW ORLEANS, LOUISIANA
Moulded Dimensions: Length 225' - 7 1/4" Breadth 38' - 0" Depth 14' - 0 1/4"					Date of Survey 10 December, 1952
Moulded displacement at moulded draught = 85 per cent. of moulded depth					Surveyor's Signature <i>J. A. Laing</i>
Coefficient of fineness for use with Tables .84					Particulars of Classification BS 8,52

Depth for Freeboard (D).	Depth correction.	Round of Beam correction.
Moulded depth ... 14.02	(a) Where D is greater than Table depth (D-Table depth) R=	Moulded Breadth (B) 38.0
Stringer plate ... 0.03	(b) Where D is less than Table depth (if allowed) (Table depth-D) R=	Standard Round of Beam = $\frac{B \times 12}{50} = 9.12$
Sheathing on exposed deck None	(15.04 - 14.08) 0.96	Ship's Round of Beam = None
$T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures $1.67 \times \frac{2.96}{6.00} = -0.82$	Difference - 9.12
Depth for Freeboard (D) = 14.08		Restricted to
		Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{9.12^2}{4} \times 1.798 = +.41$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	64.9-3/8"	64.78	8'0"		64.78	Standard Height of Superstructure 6.00
" overhang ...	11.91					" " R.Q.D. ✓
R.Q.D. enclosed ...	-					Deduction for complete superstructure 28.56
" overhang ...	-					Percentage covered $\frac{S}{L} = 43.08$
Bridge enclosed ...	-					" " $\frac{S_1}{L} = 82.02$
" overhang aft ...	-					" " $\frac{E}{L} = 62.29$
" overhang forward ...	-					Percentage from Table, Line A. 49.89
Fore enclosed ...	32.5	32.42	6'5"		32.42	(corrected for absence of forecastle (if required))
" overhang ...	21.11					Percentage from Table, Line B. ✓
Trunk aft ...	128.4-7/8"	87.86	2'11 1/2"	2.96	43.34	(corrected for absence of forecastle (if required))
" forward ...	-					Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...	-					Deduction = 28.56 x .4989 = -14.25
" " forward ...	97.20					
Total ...	240.44	185.06			140.54	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	32.56	1		32.56			1			Mean actual sheer aft = None
1/2L from A.P. ...	14.49	4		57.96			4			Mean actual sheer forward = None
1/2L " ...	3.58	2		7.16			2			Mean standard sheer aft
Amidships ...		4		0			4			Length of enclosed superstructure forward of amidships = 32.5
1/2L from F.P. ...	7.16	2		14.32			2			" " aft of " = 64.9-3/8"
1/2L " ...	28.98	4		115.92			4			
F.P. ...	65.12	1		65.12			1			
Total ...				293.04						

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{293.04}{18} (.75 - .2154) = +8.70$

If limited on account of midship superstructure. ✓

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Corrected for Flush Deck (if required)
Depth to Freeboard Deck = 14.08	Δ =	Correction for coefficient. $\frac{84+68}{1.36} = \frac{1.52}{1.36}$
Summer freeboard = 2.08	Tons per inch immersion at summer load water line	Depth Correction ... 0.82
Moulded draught (d) = 12.00	T =	Deduction for superstructures ... 14.25
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.0 = 3"	Deduction = $\frac{\Delta}{40T}$ inches	Sheer correction ... 8.70
Addition for Winter North Atlantic Freeboard (if required) = 3 + 2 = 5"	$\frac{d}{4} = 3$	Round of Beam correction ... 0.41
		Correction for Thickness of Deck amidships ...
		Other corrections, scantlings, etc. ...
		9.11 15.07 - 5.96
		Summer Freeboard = 24.95

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:-			
Tropical Fresh Water Line above Centre of Disc ...	6"	Tropical Fresh Water Freeboard ...	1'-7"
Fresh Water Line " " ...	3"	Fresh Water " " ...	1'-10"
Tropical Line " " ...	3"	Tropical " " ...	1'-10"
Winter Line below " " ...	3"	Winter " " ...	2'-4"
Winter North Atlantic Line " " ...	5"	Winter North Atlantic " " ...	2'-6"

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.

TRUNK

$$\begin{array}{r} \text{length} = 128.41 \times \frac{26.0}{38.0} \\ = 87.86 \end{array}$$

Trade of ship.....

Names of sister ships.....

Builder's name and yard number.....

Owners.....

Fee £.....



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Foundation