

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Transport Ferry Type. Port of Survey Rio de Janeiro

(Type of Superstructures.)
Ship's Name RIO MINHO Nationality and Port of Official Number Brazilian Gross Tonnage 3914.93 Date of Build 6/45 Name of Surveyor M Caldwell
324.20' Registry Rio de Janeiro Commissioned 49

Moulded Dimensions: Length 279' Breadth 54' Depth 27'
Moulded displacement at moulded draught = 85 per cent. of moulded depth. tons
Coefficient of fineness for use with Tables .91 (assumed)

Particulars of Classification A-
For service between Trinidad and River Plate

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth 27.000	(a) Where D is greater than Table depth (D - Table depth) R = <u>(27.00 - 21.61) 2.494 = +13.52</u>	Moulded Breadth (B) <u>54.00</u>
Stringer plate ... .. .031	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>5.42</u>	Standard Round of Beam = $\frac{B \times 12}{50} = 12.96$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <u>assumed</u>	If restricted by superstructures <input checked="" type="checkbox"/>	Ship's Round of Beam = <u>none</u>
Depth for Freeboard (D) = <u>27.03</u>		Difference = <u>-12.96</u>
		Restricted to Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{12.96}{4} \times 1 = 3.24$

DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure	
Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)		
Poop enclosed					" <u>ROCK</u>	
" overhang					Deduction for complete superstructure	
R.Q.D. enclosed					Percentage covered $\frac{S}{L} =$	
" overhang					" $\frac{S_1}{L} =$ } <u>NIL.</u>	
Bridge enclosed					" $\frac{E}{L} =$	
" overhang aft					Percentage from Table, Line A.	
" overhang forward					(corrected for absence of forecastle (if required))	
Fore enclosed					Percentage from Table, Line B.	
" overhang					(corrected for absence of forecastle (if required))	
Trunk aft					Interpolation for bridge less than 2L (if required)	
" forward					Deduction = <u>NIL.</u>	
Tonnage opening aft						
" " forward						
Total						

SHEER CORRECTION.							
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S
A.P.	<u>42.42</u>	1		<u>42.42</u>	<u>30"</u>	<u>30.00</u>	1
... ..	<u>18.88</u>	4		<u>75.52</u>	<u>13.00</u>	<u>13.00</u>	4
... ..	<u>4.665</u>	2		<u>9.33</u>			2
Amidships		4			0		4
... ..	<u>9.33</u>	2		<u>18.66</u>			2
... ..	<u>37.75</u>	4		<u>151.00</u>	0		4
F.P.	<u>84.84</u>	1		<u>84.84</u>	<u>42"</u>	<u>42.00</u>	1
Total				<u>381.77</u>			

Mean actual sheer aft = Deficient
Mean standard sheer aft = Deficient

Mean actual sheer forward = Deficient
Mean standard sheer forward = Deficient

Length of enclosed superstructure forward of amidships = Deficient
" " aft of " = Deficient

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

If limited on account of midship superstructure. ☒ If limited to maximum allowance of 1½ 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 = <u>27.03</u>	Δ =	Correction for coefficient $\frac{.91 + .68}{1.36} = 1.26$
Summer freeboard = <u>11.02</u>	Tons per inch immersion at summer load water line	Depth Correction 13.52
Moulded draught (d) = <u>16.01</u>	T =	Deduction for superstructures -
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>4.00" = 4"</u>	Deduction = $\frac{\Delta}{40 T}$ inches = <u>4"</u>	Sheer correction 10.74
Addition for Winter North Atlantic Freeboard (if required) =		Round of Beam correction 3.24
		Correction for Thickness of Deck amidships -
		Other corrections, scantlings, etc. -
		to a summer moulded draught of 16'-0" (16'-0" actual)
		Summer Freeboard = <u>102.25</u>

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 10'-4 1/4"
Fresh Water Line " " 4"	Fresh Water " " 10'-8 1/4"
Tropical Line " " 4"	Tropical " " 10'-8 1/4"
Winter Line below " " Not Assigned	Winter " " Not Assigned
Winter North Atlantic Line " " Not Assigned	Winter North Atlantic " " Not Assigned

Tropical Fresh Water Freeboard 10'-4 1/4"
Fresh Water " " 10'-8 1/4"
Tropical " " 10'-8 1/4"
Winter " " Not Assigned
Winter North Atlantic " " Not Assigned

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	Stiffeners	...	...	...	...	...	...	...	...
	Brackets, Stays	...	...	...	...	...	...	...	...
HATCH BEAMS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Scantling and Sketch	...	...	...	...	...	...	...	...
	Angles	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
FORE AND AFTERS	Number	...	...	...	...	...	...	...	...
	Spacing	...	...	...	...	...	...	...	...
	Unsupported Lengths	...	...	...	...	...	...	...	...
	Scantling* and Sketch	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
HATCH COVERS	Material	...	...	...	...	...	...	...	...
	Thickness	...	...	...	...	...	...	...	...
	How fitted	...	...	...	...	...	...	...	...
	Bearing Surface	...	...	...	...	...	...	...	...
Spacing of Cleats	...	...	...	...	...	...	...	...	...
Number of Tarpaulins	...	...	...	...	...	...	...	...	...
*Are wood fore and afters steel shod at all bearing surfaces? yes / Are battens and wedges efficient and in good condition? yes / Are tarpaulins in good condition and in accordance with rule requirements? yes / Are lashings provided in accordance with rule requirements? yes /									

Particulars of fiddle, funnel and ventilator coamings:— Closed stokehold.
Funnel and Ventilator coamings reasonably high above the deck.

Particulars of Flush Bunker Scuttles:— none

Particulars of Companionways:— 2 on Ford, deck of steel, riveted to deck, 7'0" x 3'3" x 6'6".
Coaming 24" high. Door of steel strongly constructed, operated from both sides.

2 skylights (on Freeboard deck aft of E.R. casing to crews quarters) of steel, riveted to deck, 8' 2" x 8' 0" x 24" to opening, closed by hinged steel shutters.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

All round ventilators 6 - 24" diameter to hold spaces, of steel, substantially constructed, provided with efficient closing appliances.
2 Fan Trunks abreast deck casing on Ford, deck, of steel, riveted to deck, 2' x 4'6" x 5'6" high
10 - ditto - (5 each side of E.R. casing) 3'6" high, 4- 20"x8", 6- 10"x10".
2 ditto - at aft end of E.R. casing, 8"x8"x 24" high.
2 Vents, 10" dia. at aft end of E.R. casing, of steel, riveted to deck, substantially constructed, coamings 8' high, bracketed to casing.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
Fore Peak - 3" dia. - 3'6" high, on freeboard deck.
Bottom and side tanks - 2 - 3" dia. and 6- 2 1/2" dia. on freeboard deck 36" high. All of steel, substantially constructed.
Wood plugs and canvas covers provided for all air pipes.

Particulars of Gangway Cargo and Coaling Ports:—

none

Particulars of Scuppers and Sanitary Discharge Pipes — 2 - 3" and 1 - 3 1/4" each side of after housing, led from below the freeboard deck, of cast steel and provided with two automatic non - return valves.

Particulars of Side Scuttles:—

14 each side of lower accommodation below freeboard deck, 12" dia all fitted with efficient inside deadlights, hinged to their positions. All of substantial construction.

Lowest side scuttle 23'6" above top of keel.

Particulars of Guard Rails:—

Raised bulwark forward.
Remainder rails 3'6" high, 3 rails, stanchions spaced 4'6" apart.

Particulars of Gangways, Lifelines, etc.:—

Lifelines fitted shackled to eyes on XX house forward and to the front of the housing aft.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well
Forward Well
State position of each freeing port ... { After Well:— (F. and A. position and height above deck edge) { Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard.						

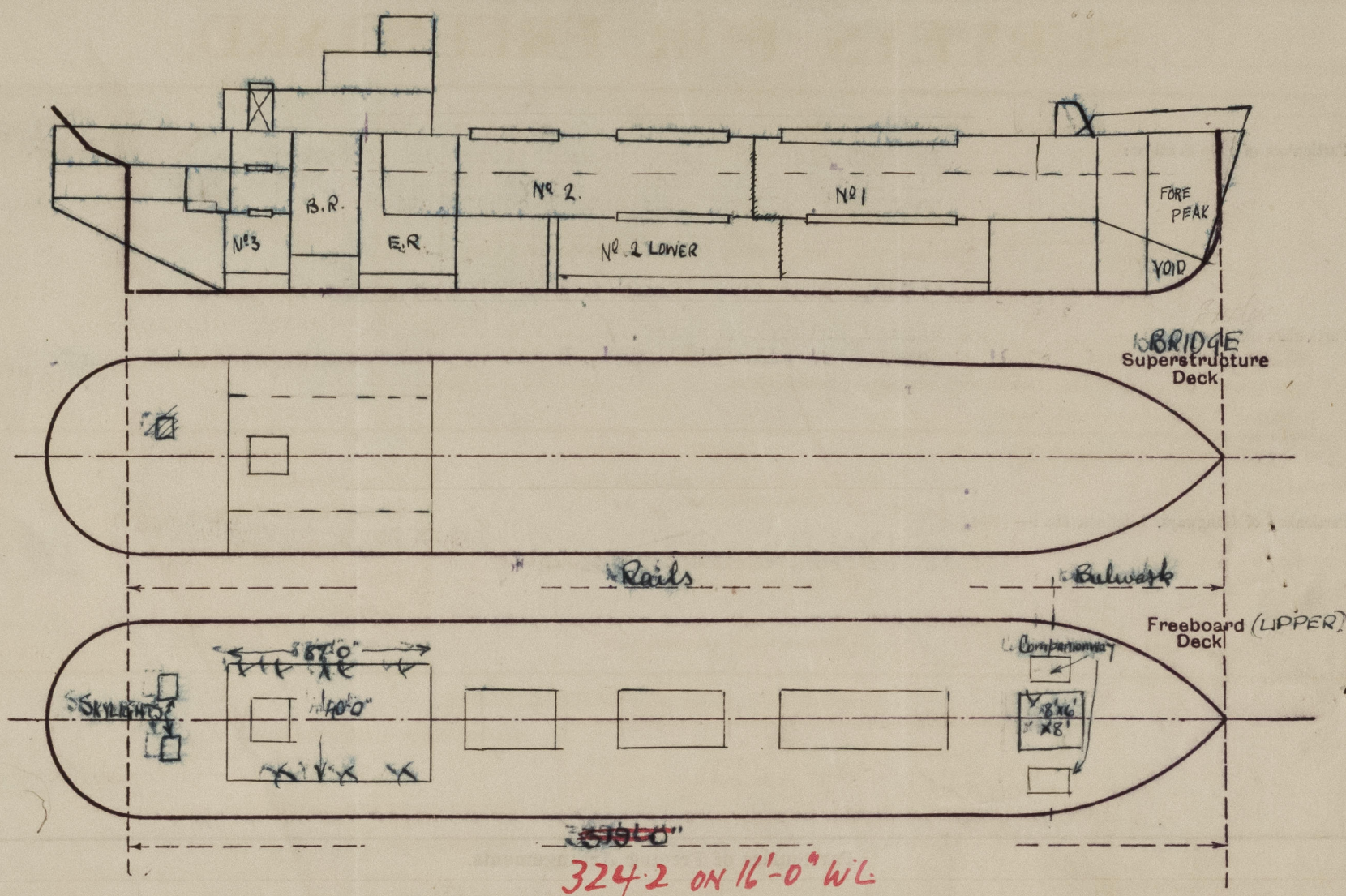
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead
Raised Quarter Deck Bulkhead
Bridge, After Bulkhead
Bridge, Forward Bulkhead
Forecastle Bulkhead
Trunk, Aft
Trunk, Forward
Exposed Machinery Casings on Freeboard or Raised Quarter Decks
Exposed Machinery Casings on Superstructure Decks
Machinery Casings within Superstructures not fitted with Class I Closing Appliances
Deckhouses on Flush Deck Ships

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead	...
Raised Quarter Deck Bulkhead	...
Bridge, After Bulkhead	...
Bridge, Forward Bulkhead	...
Forecastle Bulkhead	...
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...
Exposed Machinery Casings on Superstructure Decks	...
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...
Deckhouses on Flush Deck Ships	...

Doors of steel, strongly constructed and operated from both sides.

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



State any special features in the construction of the ship:—

Builder's name and yard number: Hawthorn, Leslie & Co. Ltd. Yard No 680. - Completed by E.G.Fontes, Rio de Janeiro

Names of sister ships: _____

Owners: E.G.Fontes, Rio de Janeiro

Fee: 3,000 ~~4,000.00~~

Received by me: _____

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