

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

F. 9.

22 SEP 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Having Combined Poop + Bridge with Forecastle Weld DeckPort of Survey LISBON

(Type of Superstructures.)

Date of Survey 13th 14th 15th Sep^r 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

CUNENEPORTUGUESE
LISBON58751911Name of Surveyor G.T.B. ScullardMoulded Dimensions: Length 450' Breadth 58' Depth 29' 6 1/2"Moulded displacement at moulded draught = 85 per cent. of moulded depth 14250 tonsCoefficient of fineness for use with Tables .761Particulars of Classification +100 A.1.S.S. N° 1 - 7.31.
S.S. Liv No 3-8,27

Depth for Freeboard (D)

Moulded depth 29.54Stringer plate04

Sheathing on exposed deck

$$T \left(\frac{L-S}{L} \right) =$$

Depth for Freeboard (D) = 29.58

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R =(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =

$$(30.00 - 29.58) 3.00 = -1.26"$$

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 58.00

$$\text{Standard Round of Beam} = \frac{B \times 12}{50} = 13.92"$$

$$\text{Ship's Round of Beam} = 14.50"$$

$$\text{Difference} = 58"$$

Restricted to

$$\text{Correction} = \frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{58}{4} \times .0487 = -0.01"$$

DEDUCTION FOR SUPERSTRUCTURES.

*Poop enclosed

" overhang

R.Q.D. enclosed

" overhang

Bridge enclosed... ..

" overhang aft

" overhang forward

Forecastle enclosed open

" overhang

Trunk aft

" forward

Tonnage opening aft

" forward

Total

Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
379.5	379.50	8' 0"		379.50
2.17				
26	1.08			1.08
50'	47.50	8' 0"		47.50
431.67	428.08			428.08

Standard Height of Superstructure 7.50

" " R.Q.D.

Deduction for complete superstructure 42.00

$$\text{Percentage covered } \frac{S}{L} = 95.92\%$$

$$\frac{S_1}{L} = 95.13\%$$

$$\frac{E}{L} = 95.18\%$$

Percentage from Table, Line A. 94.01%
(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)

$$\text{Deduction} = 42 \times 94.01 = -39.48"$$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	55.00	1		55.00	53	53.00	1		53.00
1/4 L from A.P.	24.475	4		97.90	29	16.70	4		87.00
1/2 L "	6.05	2		12.10	3	2.75	2		8.50
Amidships		4			0		4		
3/4 L from F.P.	12.10	2		24.20	23	13.92	2		27.84
3/4 L "	48.95	4		195.80	56	55.69	4		222.76
F.P.	110.00	1		110.00	126	126.00	1		126.00
Total				495.00					531.10

Mean actual sheer aft = Deficient (above .75)
Mean standard sheer aftMean actual sheer forward = Excess
Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.10}{18} (.75 - .4796) = -.54"$$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 29.58Summer freeboard = 4.25Moulded draught (d) = 25.33

Correction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.33 = 161

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 = $\frac{\Delta}{40T}$ inches

$$= \frac{165}{40 \times 161} = .025"$$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{.68 \times .761}{1.36} = \frac{1.441}{1.36}$$

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

87.1092.2841.2941.250.99SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc

Fresh Water Line " "

Tropical Line " "

Winter Line below " "

Winter North Atlantic Line " "

Tropical Fresh Water Freeboard

Fresh Water " "

Tropical " "

Winter " "

Winter North Atlantic " "

27 SEP 1932

002038-002050-0040'6

21/1/41

RECEIVED

RECEIVED

040'12

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECK										
Description of Hatchway	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	No. 7	No. 8	No. 9	No. 10
Dimensions of Hatchway	18' x 18'	24' x 18'	18' x 18'	20' x 18'	24' x 18'	23' x 18'	20' x 18'	20' x 18'	18' x 18'	18' x 18'
COAMINGS										
Height above Deck	60"	36"	36"	36"	11"	11 1/2"	14 1/2"	11"	11"	11"
Thickness	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Stiffeners	8" x 3" x 3/8"	Same	Same	Same	Same	Same	Same	Same	Same	Same
Brackets, Stays										
HATCH BEAMS										
Number	3	5	3	3	5	4	3	3	3	3
Spacing	4' 6"	4' 3"	4' 8"	5' 2"	4' 3"	4' 10"	5' 2"	5' 2"	4' 8"	4' 8"
Scantling and Sketch	1A 2B 2 3/4" x 1 1/2"	2A 3B 2 1/2" x 1 1/2"	1A 2B 2 1/2" x 1 1/2"	1A 2B 2 1/2" x 1 1/2"	2A 3B 2 1/2" x 1 1/2"	2A 2B 2 1/2" x 1 1/2"	2A 2B 2 1/2" x 1 1/2"	2A 2B 2 1/2" x 1 1/2"	1A 2B 2 1/2" x 1 1/2"	1A 2B 2 1/2" x 1 1/2"
Bearing Surface	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
FORE AND AFTERS										
Number										
Spacing										
Unstayed Lengths										
Scantling and Sketch										
Bearing Surface										
HATCH COVERS										
Material	W.P.				W.P.					
Thickness	3"				2 3/4"					
How fitted	F.A.				F.A.					
Bearing Surface	3" x 4"				3" x 4"					
Spacing of Cleats	23"	22"	23"	23"	40"	38 1/2"	32"	37"	37"	37"
Number of Tarpaulins	4	4	4	4	1	1	1	1	1	1

Particulars of fiddley, funnel and ventilator coamings:—
Fiddley 6' 6" above boat deck, + extra coaming 3' 5" high. Stakehold gratings within coaming, covered by steel hinged covers. Ventilator in good condition. Engine room skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

None.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—
Fore 15' x 42", 2-7' x 14", 2-9 1/2' x 15", 6-9' x 32" canvas covers, all vents. 23-22' x 48" to various holds. 6-11' x 37" to tunnel; 2-9 1/2' x 36 1/2" to after stores.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—
No plugs provided for air pipes. No. 1, 2, 3 as sketch 2" pipe combined air + sounding mouth 1" from deck; 2+3 each 1 steel gooseneck 2 3/4" x 27". 4+5 each 4 1/2" x 26" cast iron gooseneck. 6+7 each 4 1/2" x 25" cast iron gooseneck; 8+9 each 3 1/2" x 16" C.I. gooseneck; 10, 11 each 2" x 35" steel gooseneck; 12, 2" x 34" steel gooseneck. After peak 2" x 22" steel gooseneck; 1-3" x 14" steel [?].

Particulars of Gangway Cargo and Coaling Ports:—

None.

Particulars of Scuppers and Sanitary Discharge Pipes — 1-3" galley scupper P.O. no valve. 2-5" officers W.C. 2" valves. 2-5" Chief Stewards W.C. 2" valves. 1-20" ash pipes. all discharges above freeboard deck. The following are forepeak store discharges below freeboard deck. Each P.O. side, 1-4 1/2" crew W.C. + 1-3" lavatories discharges, all with 2" valves.

Particulars of Side Scuttles:—

Side scuttles above freeboard deck, strongly constructed with efficient deadlights.

Particulars of Guard Rails:—

Fore 14', 23', 32', 41" stanchion spacing 4' 9".
Bridge fore 11', 20', 32', 42".
Bridge aft 11', 20', 32', 42".

Particulars of Gangways, Lifelines, etc.:—

On Port side from Bridge to Forecastle, wood gangway 4' wide; 4 stanchions 4' 8" spacing with chain through eye at top. On Forecastle head, full width wash plate 32' high at centre, 3/8" plate, strongly constructed.

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	17' 4"	4' 4"	4' 0" x 1' 6"	2	12.	8

State position of each freeing port (F. and A. position and height above deck edge) After Well:—
Forward Well:— 5' 6" + 14' 6" 8" above deck edge.
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 1-1" bar.
Additional area where sheer is less than standard.

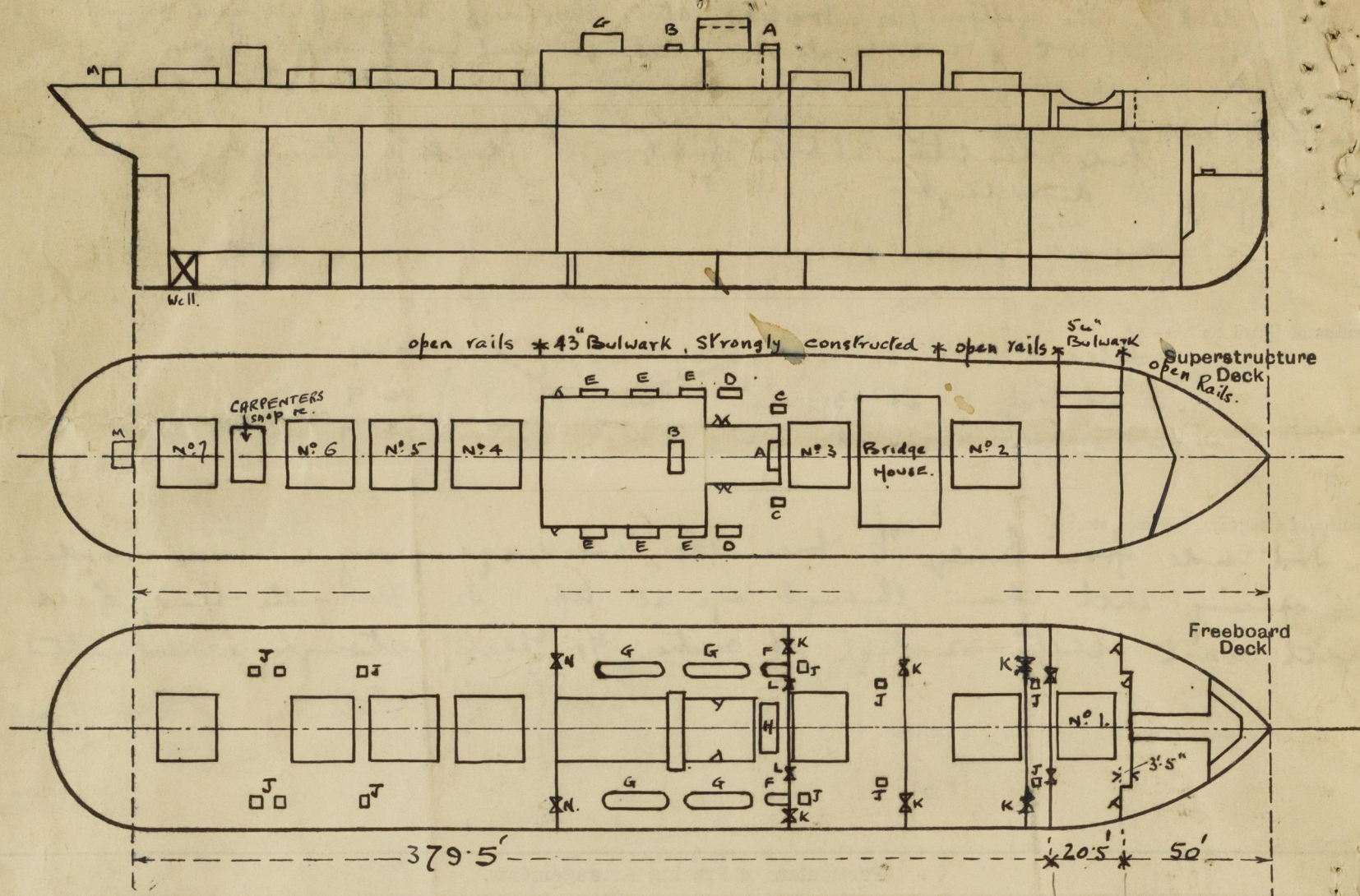
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	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	9 1/2" x 5"	7/16"	8.2. 9 1/2" x 3 1/2" x 1/2"	31 1/2"	Brackets T. & B.	3' 7" x 4' 0"	24"	8' 0"
Forecastle Bulkhead	8 1/2" x 5"	7/16"	flanged plate 5"		-	2' 2" x 5' 2"	20"	8' 0"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	9" x 1/2"	3/8"	flanged plate 1 1/2"	51"	-	2' 4" x 4' 11"	19"	7' 6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	-	5/16"	5 1/2" x 2 1/2" x 3/8"	54"	-	3' 11" x 1' 9"	12"	8' 0"
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	2 steel plates bolted through bulkhead plating, 7/8" bolts, 5 3/4" pitch.
Forecastle Bulkhead	open at centre with 2 1/2" steel sill. at sides to P.O. quarters.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	2 steel doors, in halves to stakehold. Operated both sides.
Exposed Machinery Casings on Superstructure Decks	2 steel doors, in halves to stakehold. Operated both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2 steel doors to bunkers, operated outside only.
Deckhouses on Flush Deck Ships	

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 shown on the following sketches:—



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

A. Coaling Hatch, trunked to main deck. 5'6" x 16'4" Coaming 9" Hatches 2 1/2" F & A. Cleats 24" Tarpsaulins 1.
 B. " " " " " 6'9" x 16'7" " 24" " 2 1/2" " " 24" " 1.
 2 " " " " " 4'6" x 4'0" " 36" " 2 1/2" P & S. " 21" " 2.
 2 " " " " " 6'9" x 3'0" " 33" " 3" " 17" " 2.
 " " " " " 6'9" x 2'10" " 33" 1 Cover, wood 2 1/4" " 18" " 2.
 " " " " " 13'4" x 5'0" " 5" Hatches 2 1/2" P & S. " 32" " .
 " " " " " 20'0" x 4'0" " 5" " " " 42" " .
 " " " " " 9'0" x 12'0" " 5" " " " 36" " .
 " " " " " 2'6" x 1'11" " 8 3/4" 1 wood Cover 2 1/2" " 20" " .
 C. Trimming Hatches.
 D. Openings in Bulkhead 5'6" x 2'6" closing; 2 3/4" shifting Boards in Channels of double angles rivetted to bulkheads. Angles 4 1/4" x 2 1/2" x 3/8" Sills 6 1/2".
 " " " 4'0" x 2'6" closing; steel plates, bolted through bulkhead. Fitch 9" horizontal 10" vertical; Sill 24".
 E. Hatch to after stores. 6'6" x 5'1" Coaming 36" On steel Coaming a wood coaming 7 1/2" high x 2 1/2" clipped to Coaming. 1 Cover, wood 1 1/8" with hinged brody hatch.
 F. Opening in Bulkhead. Cleats 23" Tarpsaulins 1. Closing as K. Sill 24" size of opening 4'0" x 3'0".
 Deadweight scale:— 23-5 1/2 - 8000 tons; 24-3 1/2 - 8500 tons; 25-1 1/2 - 9000 tons; 25-3 - 9250 tons.
 Vessel examined in drydock in May 1932. Now examined afloat & found in good Condition.

Builder's name and yard number. Glensburge Schiffst Ges. Glensburg.

Names of sister ships.

Owners Soc. Geral de Comercio, Industria e Transportes. Lda. Lisbon.

Fee £ : : :

Received by me



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