

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~ *Twin Screw Motor*
having *Forecastle, Poop and Bridge*

(Type of Superstructures.)

Port of Survey *Copenhagen*

Date of Survey *30th Sept. 1932.*

Name of Surveyor *Wk. Juul*

Ship's Name *"Argus"* Nationality and Port of Registry *Panama City* Official Number *✓* Gross Tonnage *✓* Date of Build *1932*

Moulded Dimensions: Length *470'* Breadth *65'2"* Depth *35'4 1/2" (measured)*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *21280* tons

Coefficient of fineness for use with Tables *.81*

Particulars of Classification **100 A1 carrying petroleum in bulk. Longitudinal framing (contemplated)*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>35'4 1/2"</i>	(a) Where D is greater than Table depth (D-Table depth) R =	Moulded Breadth (B) <i>65'2"</i>
Stringer plate <i>78</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R =	Standard Round of Beam = $\frac{B \times 12}{50} =$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam <i>16" =</i>
Depth for Freeboard (D) =		Difference
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	101.33		7.50		
" overhang ...	3.00		7.50		
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed...	31.42	see sketch	7.50		
" overhang aft ...	5.00		7.50		
" overhang forward	.25		7.50		
Deck enclosed ...	43.92		7.50		
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward					
Total ...					

Standard Height of Superstructure

" " R.Q.D.

Deduction for complete superstructure

Percentage covered $\frac{S}{L} =$ " " $\frac{S_1}{L} =$ " " $\frac{E}{L} =$

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 =

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...		1			59 1/4		1		
1/4 L from A.P. ...		4			24 5/8		4		
1/2 L " ...		2			6 1/2		2		
Amidships ...		4			0		4		
3/4 L from F.P. ...		2			14		2		
3/4 L " ...		4			56 7/8		4		
F.P. ...		1			134		1		
Total ...									

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{21} \right) =$

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 = Ft.

Summer freeboard =

Moulded draught (d) =

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line *2883* $\Delta = 19900 \text{ Tons}$

Tons per inch immersion at summer load water line

T = *65.4*Deduction = $\frac{\Delta}{40 T}$ inches =

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard =

SUMMER 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 " " ...

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	oil-tight	oil-tight	oil-tight	water-tight	in fore-castle	on fore-castle	on fore-castle	on fore-castle	on fore-castle
Dimensions of Hatchway	17' 0"	2' 0"	6' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"	1' 0"
COAMINGS									
Height above Deck	33 1/2	33 1/2	23 1/2	36	18	18	18	18	18
Thickness	.40	.40	.38	.44	.26	.26	.26	.26	.38
Stiffeners	100.75-75	100.75-75	100.75-75	3.3-3.2	75.75-9	75.75-9	75.75-9	75.75-9	2 1/4 x 1 1/4
Brackets, Stays				3.3-3.2	75.75-9	75.75-9	75.75-9	75.75-9	2 1/4 x 1 1/4
HATCH BEAMS									
Number				1					
Spacing				10 x 3 1/2 x 3 1/2					
Scantling and Sketch				10 x 3 1/2 x 3 1/2					
Bearing Surface									
FORE AND AFTERS									
Number									
Spacing									
Unsupported Lengths									
Scantling and Sketch									
Bearing Surface									
HATCH COVERS									
Material	Steel	Steel	Steel	Steel	wood	wood	wood	steel	
Thickness	.50	.50	.38	.38	2 1/2	2 1/2	2 1/2	.34	
How fitted	hinged	hinged	hinged	hinged				hinged	
Bearing Surface									
Spacing of Cleats									
Number of Tarpaulins									
Are wood fore and afters steel shod at all bearing surfaces?									
Are battens and wedges efficient and in good condition?									
Are tarpaulins in good condition and in accordance with rule requirements?									
Are lashings provided in accordance with rule requirements?									

Particulars of fiddle, funnel and ventilator coamings:— All openings in fiddle top provided with permanently attached steel covers. Funnel and skylight of substantial construction. Ventilators on fiddle top: 6' 0" 36" diam. 1830 x 3/16" coaming. 4' 0" 21" " 1830 x 3/16" "

Particulars of Flush Bunker Scuttles:—

none.

Particulars of Companionways:— Access to forward pumproom through companionway. 30" plate, 15" x 15" x 8" stiffeners, 15" x 15" steel hinged w.t. door. Access to midship pumproom in after bulkhead of pumproom house, plating .30, stiffeners L 3 x 2 1/2 x .30, 28" spacing. 18" x 18" steel hinged w.t. door with turnbuckles capable of being manipulated from both sides. Access to crew quarters through steel door in steel house on poop, 18" x 18" steel hinged w.t. door with turnbuckles capable of being manipulated from both sides. Access to steering engine room through companionway on poop, 18" x 18" steel hinged w.t. door with turnbuckles capable of being manipulated from both sides. 75 x 75 x 8" stiffeners, 14" x 14" (above wood deck) w.t. door with turnbuckles capable of being manipulated from both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— On Upperdeck: 2' 0" 18" diam. 30 x .40 Forehold. Poopdeck 2' 0" 12" diam. 2' 6" x .38 stores. Fore-castle 1' 0" 18" " 3' 0" x .40 Forehold. " 2' 0" 12" " 2' 6" x .34 stores. Bridge-deck 1' 0" 6" " 3' 0" x .26 Lamproom. " 2' 0" 12" " 2' 6" x .26 stores. " 1' 0" 9" " 2' 6" x .34 stores. All coamings efficiently connected to deck, partly wood covers, partly steel covers with canvas covers supplied.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— Opening of airpipes on poop and fore-castle 18" above deck. " " " freeboard deck 36" " " wood plugs and canvas covers supplied.

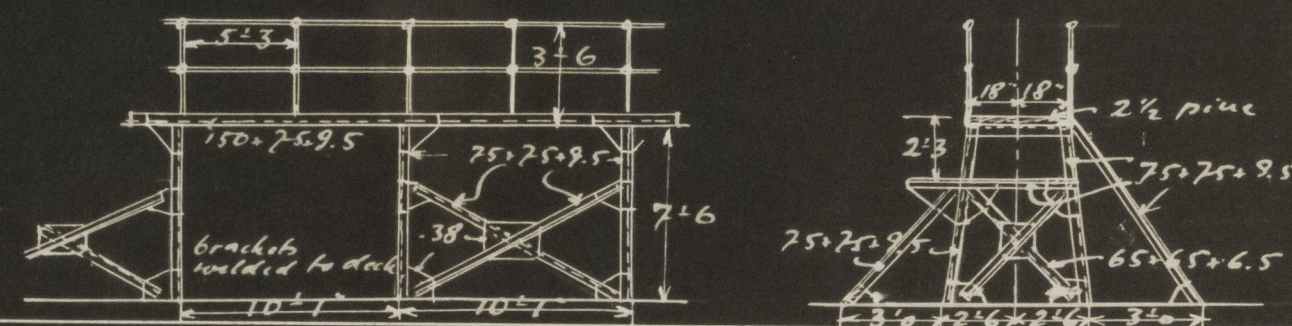
Particulars of Gangway Cargo and Coaling Ports:—

none.

Particulars of Scuppers and Sanitary Discharge Pipes:— Sanitary discharge pipes led overboard above freeboard deck (cast iron). Sanitary discharge pipes led overboard below freeboard (steel casting). All sanitary discharge pipes fitted with non return valves. 82' forward amidship, and 2 1/2" steel pipe scupper forward of poop front bulkhead and 2 1/2" steel pipe scupper. Particulars of Side Scuttles:— Side lights in poop space of boats and fitted with efficient inside deadlights.

Particulars of Guard Rails:— Open rails 3' 6" height 3 rods equally spaced, stanchions about 5' 5" apart. Open rails also on poop and fore-castle. Bulwark on upperdeck as per sketch 3' 6" height with 6 150 x 75 x 9.5 rail and stanchions 5 150 x 75 x 9.5.

Particulars of Gangways, Lifelines, etc.:— Lifelines from bridge to fore-castle.



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
	<i>open rails all fore and aft (see sketch)</i>					
After Well		<i>3' 6"</i>				
Forward Well		<i>3' 6"</i>				
State position of each freeing port (F. and A. position and height above deck edge)			<i>opening in bulwark as per sketch</i>			
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—			<i>30" x 3 1/2", 8" above deck.</i>			
Additional area where sheer is less than standard.						

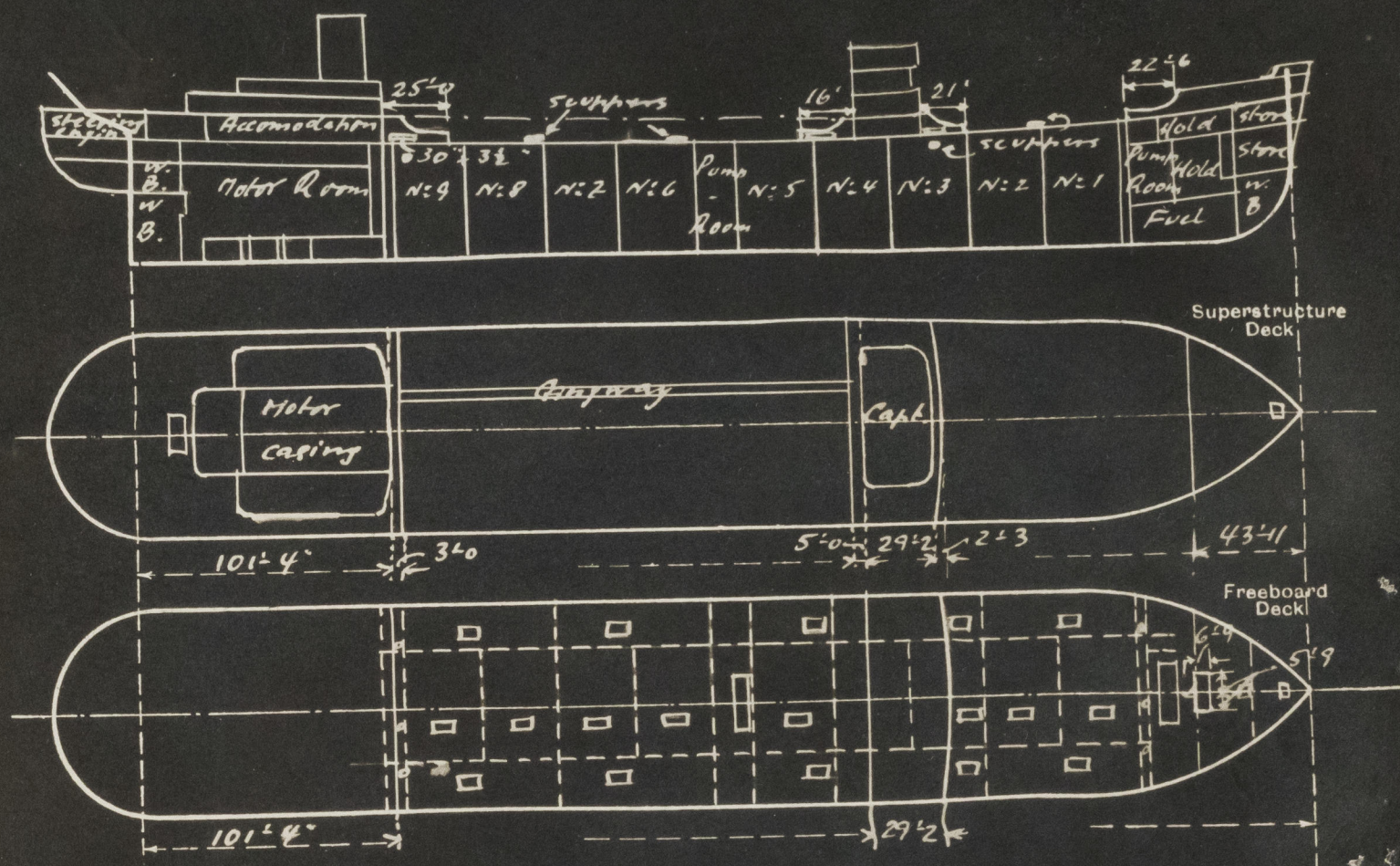
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	.45	.45	250.90.12.5	30"	brackets	5' 0" x 2' 4 1/2"	18"	2' 6"
Raised Quarter Deck Bulkhead					connected to beams and lugs of hull	5' 0" x 2' 0"	15" (Lamproom)	
Bridge, After Bulkhead	.32	.32	4 1/2 x 3 x .30	32"	connected to beams and lugs of hull	4' 2" x 3' 2"	21"	7' 6"
Bridge, Forward Bulkhead	.40	.40	250.90.13.5	32"	connected to beams and lugs of hull			7' 6"
Fore-castle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	.26	.26	120.75 x 8	30	brackets			4' 9"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	.30	.26	120.75 x 8	30		4' 11" x 2' 5"	18"	7' 6"
Deckhouses on Flush Deck Ships								

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

Poop Bulkhead	Steel hinged w.t. doors with turnbuckles capable of being manipulated from outside only.
Raised Quarter Deck Bulkhead	10" x 10" steel plate with 10 hook bolts 7/8" diam.
Bridge, After Bulkhead	on p.s. steel hinged (not w.t.) door to lamproom.
Bridge, Forward Bulkhead	
Fore-castle 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	are steel hinged door each side capable of being manipulated from both sides.
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:—
*Fishwood bracketless system,
 2 longitudinal bulkheads
 Displacement 19900 tons on
 approximate L.W.L. 28'-3" draught.*

Builder's name and yard number *M. Burmeister & Waini Maskin- & Reibshypperi Co.*

Names of sister ships *"Regina" (yard N:625) "Astor", Panama City (yard N:627)*

Owners *Neptune Shipping Ltda. S.A. Panama City.*

Fee £ *To be charged on completion.* Received by me

Mr. J. J. J.



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