

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

23020.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *ARIS* *Poop Bridge & Forecastle.*Port of Survey **NEWPORT, MON.**by *MICHAELIS POUTOUS* (Type of Superstructures.)Date of Survey *24th Aug 1932*

Ship's Name

Nationality and Port of Official Number

Gross Tonnage

Date of Build

ex **MOUNT PINDUS**
(EX "MAINDY GRANGE")Registry *Greek*
Panama *Panama* *270*

4810

1914-6.

Name of Surveyor *W. Macfarlane*
*John B. Lonsdale*Moulded Dimensions: Length *349.5* Breadth *50.62* Depth *30.33*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *11615* tonsCoefficient of fineness for use with Tables *82*Particulars of Classification *SSA 100A1**S.S. No 3-12.27*

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	... 30.33	(a) Where D is greater than Table depth (D-Table depth) R =		Moulded Breadth (B)	50.62
Stringer plate	... 0.04	(30.37 - 25.30) 2.919 = + 14.8		Standard Round of Beam = $\frac{B \times 12}{50}$	12.15
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth-D) R =		Ship's Round of Beam	1.15
$T \left(\frac{L-S}{L} \right) =$		If restricted by superstructures		Difference	13.12
Depth for Freeboard (D) =	30.37			Restricted to	1.97
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{1.97}{4} \times 0.5335 = -0.13$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	33.9	33.75	7.6		33.75
" overhang ...	3	.12			.12
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	110.6	110.50	7.6		110.50
" overhang aft ...	3	.19			.19
" overhang forward ...	3	.12			.12
Wale enclosed ...	32.0	32.36	7.6		32.36
" overhang ...	32.36				
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	177.36	177.04			177.04

Standard Height of Superstructure	7.295
" " R.Q.D.	
Deduction for complete superstructure	40.63
Percentage covered $\frac{S}{L} =$	46.74
" " $\frac{S_1}{L} =$	46.65
" " $\frac{E}{L} =$	46.65
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	33.15
Interpolation for bridge less than 2L (if required)	
Deduction =	40.63 x 33.15 = 13.47

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	47.95	1		47.95	65.375	65.37	1		65.37
$\frac{3}{8}L$ from A.P. ...	21.34	4		85.36	27.65	27.65	4		110.60
$\frac{3}{8}L$ " ...	5.27	2		10.54	6.895	6.89	2		13.78
Amidships ...		4			x		4		
$\frac{3}{8}L$ from F.P. ...	10.55	2		21.10	12.928	12.93	2		25.86
$\frac{3}{8}L$ " ...	42.68	4		170.72	51.843	51.84	4		207.36
F.P. ...	45.90	1		45.90	121.625	121.62	1		121.62
Total ...				431.57					544.59

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{431.57}{18} \left(.75 - \frac{2337}{51.63} \right) = -3.24$

If limited on account of midship superstructure.

Mean actual sheer aft =	Even
Mean standard sheer aft	
Mean actual sheer forward =	Even
Mean standard sheer forward	
Length of enclosed superstructure forward of amidships =	149
" " aft of " =	142

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 30.37
Summer freeboard = 5.83
Moulded draught (d) = 24.54

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.13 $\frac{1}{4}$

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 11100$

Tons per inch immersion at summer load water line

T = 39.58

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

= 7

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient $\frac{.82 + .68}{1.36} = \frac{1.50}{1.36}$

	+	-
Depth Correction	14.80	
Deduction for superstructures		13.47
Sheer correction		3.24
Round of Beam correction		.13
Correction for Thickness of Deck amidships		
Other corrections, scantlings, etc.		
	14.80	16.84

Summer Freeboard = 69.93

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

Tropical Fresh Water Line above Centre of Disc	... 13 $\frac{1}{4}$
Fresh Water Line	... 7 $\frac{1}{4}$
Tropical Line	... 6 $\frac{1}{4}$
Winter Line below	... 6 $\frac{1}{4}$
Winter North Atlantic Line	... 6 $\frac{1}{4}$

Tropical Fresh Water Freeboard	... 4 - 8 $\frac{1}{4}$
Fresh Water	... 5 - 3 $\frac{1}{4}$
Tropical	... 5 - 3 $\frac{1}{4}$
Winter	... 6 - 4 $\frac{1}{4}$
Winter North Atlantic	... 6 - 4 $\frac{1}{4}$

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway	1	2	3	4	5	6	7	8	9	10
Dimensions of Hatchway	11' 6" x 21' 0"	25' 6" x 21' 0"	25' 6" x 21' 0"	14' 3" x 20' 0"	25' 6" x 21' 0"	15' 6" x 21' 0"	12' 9" x 21' 0"	19' 6" x 16' 0"	12' 8" x 12' 0"	
COAMINGS	Height above Deck	42"	36"	36"	46"	36"	36"	30"	30"	
	Thickness	42"	36"	36"	46"	36"	36"	30"	30"	
	Sides	42"	36"	36"	46"	36"	36"	30"	30"	
	Stiffeners	42"	36"	36"	46"	36"	36"	30"	30"	
HATCH BEAMS	Number	1	4	4	3	4	4	3	2	
	Spacing	5' 3"	5' 1"	5' 1"	4' 9"	5' 1"	5' 1"	4' 10"	4' 2"	
	Scantling and Sketch	27" x 25"	27" x 25"	27" x 25"	18" x 16"	27" x 25"	27" x 25"	21" x 20"	14" x 8"	
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"	
FORE AND AFTERS	Number									
	Spacing									
	Unsupported Lengths									
	Scantling and Sketch									
HATCH COVERS	Material	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	W.P.	
	Thickness	3"	3"	3"	3"	3"	3"	3"	3"	
	How fitted	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	
	Bearing Surface	3' 6" x 4"	3' 8" x 4"	3' 8" x 4"	3' 8" x 4"	3' 8" x 4"	3' 8" x 4"	3' 8" x 4"	3' 6" x 3"	
Spacing of Cleats	72"	72"	72"	72"	72"	72"	72"	72"	72"	
Number of Tarpaulins	2	2	2	2	2	2	2	2	2	

Particulars of fiddle, funnel and ventilator coamings:-

Stikhold gratings covered by strong steel hinged covers
Sidley, funnel & Ventilator coaming in efficient 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:-

No. 1 2 11 dia coaming 30" x 25" 36" thick
No. 2 2 18" 36" thick
After Well 10 17" 36" x 38"
Deck 2 3 18" dia x 38" thick
2 17" coaming 36" x 38"
2 18" 36" x 38"
2 10" 36" x 38"
No. 3 4 17" dia coaming 36" high x 28"
2 16" 36" x 38"
2 5 18" dia x 38"
Incasite 4 17" dia coaming 12" x 25"
6 16" 12" x 25"

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:-

Poep 2 1/2 air pipes 3" dia two shell plating 4" L above deck to A.P.T.
After Well 2 1/2 air pipes 2 1/2" dia 38" high to D.P.T.
Deck 4 0 2 1/2" 10" x 6"
Incasite 2 1/2 28" 28"
Sidley 1 0 2 1/2 10" x 6" A.P.T.

Particulars of Gangway Cargo and Coaling Ports:-

None

Particulars of Scuppers and Sanitary Discharge Pipes:-

All soil pipes above bulkhead deck & fitted with storm
valves at ship's side
Scuppers from Bridge space iron pipes no storm valves
Wood chocks at deck level

Particulars of Side Scuttles:-

All scuttles fitted with hinged shutters

Particulars of Guard Rails:-

Guard rails on Poep & Incasite 3" 3" high stanchions spaced 5' 0"
2 rails
Guard rails on Bridge 3" 2" high stanchions spaced 5' 0" three rails

Particulars of Gangways, Lifelines, etc.:-

None fitted

Suitable provision is made for
rigging lifelines in the forward end
afterwells.

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	102' 0"	4' 0"	4' 0" x 1' 10"	3	22 sq	20.4 sq
Forward Well	98' 0"	4' 0"	4' 0" x 1' 10"	3	22 sq	19.6 sq

State position of each freeing port ... After Well:- from B.M. 13.8" - 35.0" - 42.2" Height above sill 14"
(F. and A. position and height above deck edge) Forward Well:- 12.8" - 35.0" - 38.0" " " 12"
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:- Shutters

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

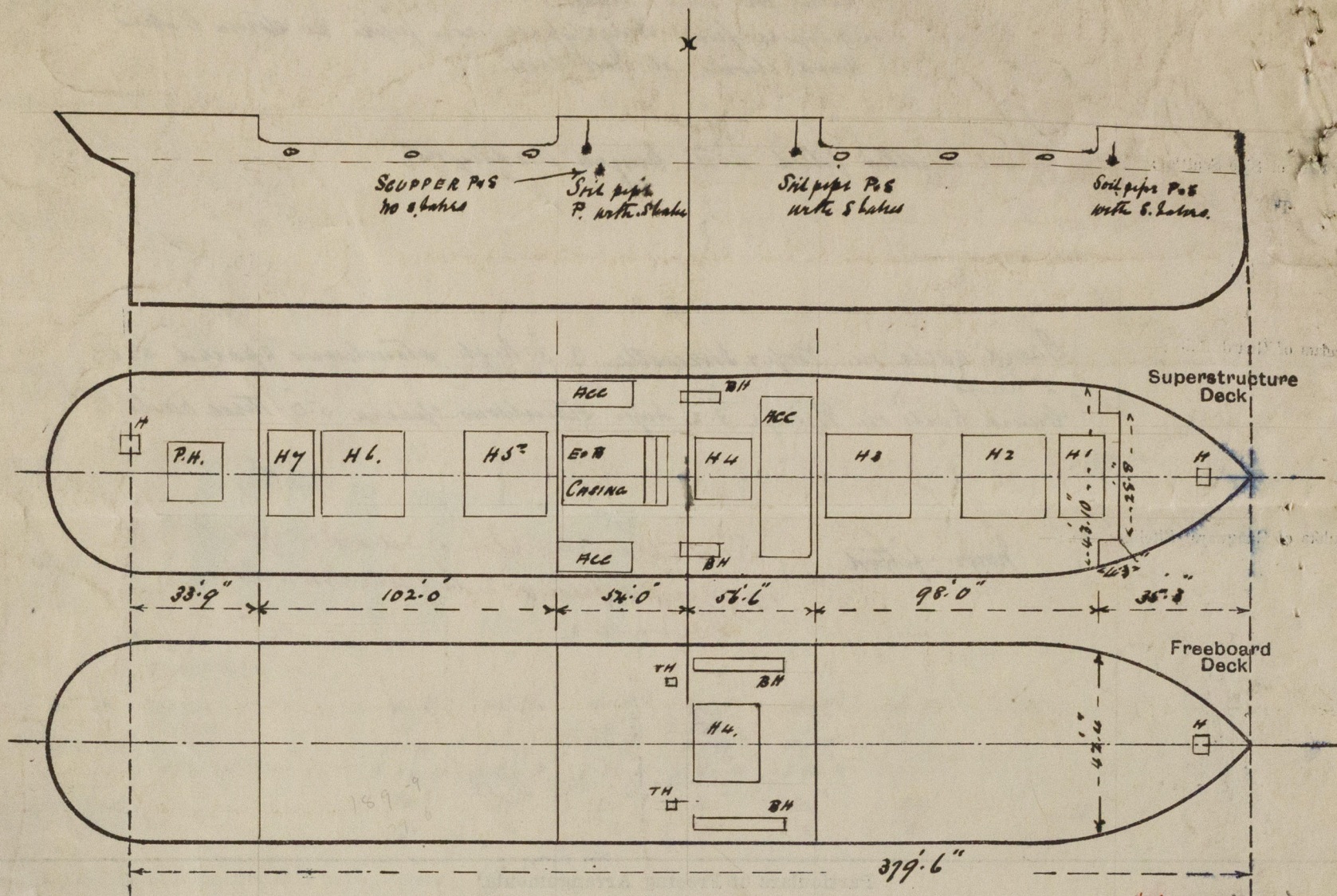
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poep Bulkhead	42"	38"	6 x 3 1/2 x 35"	27"	bit	4' 4" x 3' 0"	23 1/2"	7' 6"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	32"	25"	3 x 3 x 30"	24"	bit	4' 4" x 3' 0"	23"	7' 6"
Bridge, Forward Bulkhead	42"	38"	8 x 3 1/2 x 38" AA	30"	B.T.B.	4' 6" x 3' 0"	24 1/2"	7' 6"
Forecastle Bulkhead		32"	3 x 3 x 30"	4' 6"	bit	4' 4" x 1' 10"	22"	7' 6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	38"	38"	4 1/2 x 3 x 40"	31"	bit	3' 6" x 1' 8"	22"	7' 2"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	38"	38"	4 1/2 x 3 x 40"	31"	bit	3' 6" x 1' 8"	22"	7' 6"
Deckhouses on Flush Deck Ships								

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

Poep Bulkhead	Bolted steel plates with strong bars 8" spacing of bolts.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Bolted steel plates with strong bars 8" spacing. Steel hinged door to E.R. forward Bulkhead
Bridge, Forward Bulkhead	Steel hinged doors with strong bars & 4 bolts.
Forecastle Bulkhead	Hinged steel doors 1 1/2" thick. Fastenings defective
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors fastenings defective
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Hinged steel doors fastenings defective
Deckhouses on Flush Deck Ships	

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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:—



$$\begin{aligned}
 &= 31.0 + \frac{6.83 \times 4.25}{21.33} \\
 &= 31.0 + 1.36 \\
 &= 32.36 \text{ equiv.}
 \end{aligned}$$

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

Lesser Examined in Dry Dock for full condition Survey
 found in order. Coal hatch on side 18'7" x 6'3" coaming 3 x 3 x 32" angle
 the Hatch on Deck 3'0" x 3'0" coaming 12" x 32" Hatch rests 2 1/2" the Hatch in Side Space 3'0" x 3'0"
 coaming 3 x 3 x 32" angle (no choker battens on this hatch) one Hatch on Roof 2'6" x 1'6" coaming
 12" x 32" 2 1/2" rest hard
 On Bridge deck the Bunker Hatch on either side 12'7" x 2'10" coaming 2'7" x 36" Rest angle 2"
 In Bridge space one Bunker Hatch on either side 29'10" x 3'0" coaming 9 x 3 1/2 x 46 B.A. The above
 Hatches fitted with chocks, battens 2 1/2" WP covers & 2 tarpaulins
 Saddle Hatch coaming angle require to be dealt with together with cover hatch cover also fastenings
 of Bars in Superstructure casing in Bridge space. The forward Rigger's Hatch
 this will be done in a Mediterranean Port when the 482" hot. is carried when need is
 pressing.

8100 tons DW at 14.11" draught
 7650 " " " 14.0 "
 7175 " " " 13.0 "
 6690 " " " 12.0 "
 6225 " " " 11.0 "

Builder's name and yard number Richardson Dock & Co Ltd.

Names of sister ships

Owners The Transp Shipping Development Co Ltd.

Fee £ 12 : 15 : 0

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