

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having **POOP BRIDGE & FORECASTLE**

Port of Survey **Calcutta**Date of Survey **29.12.32**Name of Surveyor **J. Deshpande**Particulars of Classification **+100ft.1.**

Ship's Name **S.S. PISALDAR**  
Nationality and Port of Registry **BRITISH - LIVERPOOL**  
Official Number **131425**  
Gross Tonnage **4919**  
Date of Build **1912**  
Moulded Dimensions: Length **398.66** Breadth **51.4** Depth **30.9**  
Moulded displacement at moulded draught = 85 per cent. of moulded depth **11970** tons  
Coefficient of fineness for use with Tables **.778**

Depth for Freeboard (D)  
Moulded depth ... **30.75**  
Stringer plate ... **.04**  
Sheathing on exposed deck **2 3/4"**  
 $T \left( \frac{L-S}{L} \right) = 23 \times 4.538 = .10$   
Depth for Freeboard (D) = **30.89**

Depth correction  
(a) Where D is greater than Table depth  
(D - Table depth) R = **(30.89 - 26.58) 3 = 12.93** ✓  
(b) Where D is less than Table depth (if allowed)  
(Table depth - D) R =  
If restricted by superstructures

Round of Beam correction  
Moulded Breadth (B) **51.70**  
Standard Round of Beam =  $\frac{B \times 12}{50} = 12.41$   
Ship's Round of Beam = **12.50**  
Difference **.09**  
Restricted to  
Correction =  $\frac{\text{Diff}^2}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.09^2}{4} \times .4772 = -.01$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed <i>equivalent</i> ...	35.97	35.97	7.5		35.97
" overhang ...	4.23	2.11			2.11
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed <i>equivalent</i> ...	123.51	123.51	7.5		123.51
" overhang aft ...	8.49	6.37			6.37
" overhang forward ...					
Fore enclosed <i>equivalent</i> ...	34.34	34.34	7.5		34.34
" overhang ...	11.20	6.11			6.11
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	217.74	208.41			208.41

Standard Height of Superstructure **7.487**  
" " R.Q.D.  
Deduction for complete superstructure **41.91**  
Percentage covered  $\frac{S}{L} = 54.62$   
" "  $\frac{S_1}{L} = 52.28$   
" "  $\frac{E}{L} = 52.28$  ✓  
Percentage from Table, Line A.  
(corrected for absence of forecastle (if required))  
Percentage from Table, Line B. **38.28**  
(corrected for absence of forecastle (if required))  
Interpolation for bridge less than 2L (if required)  
Deduction = **-16.04** ✓

## SHEER CORRECTION.

	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	49.87	1		49.87	25.00	28.00	1		28.00
...	22.19	4		88.76	13.00	12.24	4		48.96
...	5.48	2		10.96	3.00	3.06	2		6.12
...		4			0.00		4		
...	10.97	2		21.94	7.00	6.52	2		13.04
...	44.38	4		177.52	23.00	26.07	4		104.28
...	9.74	1		9.74	58.00	60.00	1		60.00
...				448.79 ✓					260.40

Difference between sums of products  $\frac{18}{18} \left( .75 - \frac{S}{2L} \right) = \frac{188.39}{18} \left( .75 - .2731 \right) = +4.99$  ✓

account of midship superstructure.

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

Mean actual sheer aft = **Deficient**  
Mean standard sheer aft  
Mean actual sheer forward = **Deficient**, .5937 standard.  
Mean standard sheer forward  
Length of enclosed superstructure forward of amidships = **Sheer deficient**  
" " aft of " =  
Forward Sheer Standard **32.91** actual **19.56**  
133.14  
99.74  
265.79  
157.77 = .5937  
265.79

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

Depth to Freeboard Deck = **30.79**  
Summer freeboard = **6.39**  
Moulded draught (d) = **24.40**

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = **6.10** 6"  
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line  
 $\Delta = 11159$   
Tons per inch immersion at summer load water line  
 $T = 41.33$   
Deduction =  $\frac{\Delta}{40T}$  inches = **6.75**  
**6 3/4"**

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.778 + .68}{1.36} = 1.458$   
+ 1.36 -  
Depth Correction ... **12.93** ✓  
Deduction for superstructures ... **16.04** ✓  
Sheer correction ... **4.99** ✓  
Round of Beam correction ... **.01**  
Correction for Thickness of Deck amidships ... **1.20**  
Other corrections, scantlings, etc. ...  
17.92 17.25 + .67  
Summer Freeboard = **76.87**

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

Tropical Fresh Water Line above Centre of Disc ...	12 3/4	Tropical Fresh Water Freeboard ...	5 - 4 1/2
Fresh Water Line " " ...	6 3/4	Fresh Water " " ...	5 - 10
Tropical Line " " ...	6	Tropical " " ...	5 - 10 3/4
Winter Line below " " ...	6	Winter " " ...	5 - 10 3/4
Winter North Atlantic Line " " ...	6	Winter North Atlantic " " ...	5 - 10 3/4

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# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway			No. 1.	No. 2.	No. 3.	No. 4.	No. 5.		
Dimensions of Hatchway			21'8" x 15'11 1/2"	26'0" x 15'11 1/2"	10'10" x 15'11 1/2"	26'0" x 14'4 1/2"	21'8" x 15'11 1/2"		
COAMINGS	Height above Deck	...	30"		30"	as in	as in	Dumber hatches in bridge deck:-	
	Thickness	{ Sides ... 44 Ends ... 40	as in		36"	as in	as in	1 - in P.S. sides of Machinery Casings 8'5" x 3'11"	
	Stiffeners	...	9 x 3 B.H.	No. 1.	9 x 3 B.H.	No. 1.	No. 1.	5'4" x 5'10"	
	Brackets, Stays	...	Nil		Nil				
HATCH BEAMS	Number	...	3.	4.	1.	4.	3.	8 x 3 B.H. coamings, spacing of cleats 18"	
	Spacing	...	5'5"	5'2 1/2"	5'5"	5'2 1/2"	5'5"	3" Ratchet bands, bearing surface 3" x tarpaulins	
	Scantling and Sketch	...	3 x 3 x 40 angles 22' x 34 plate	as in No. 1.	3 x 3 x 40 angles 19' x 34 plate	as in No. 1.	as in No. 1.	1'3 Ratchet in bridge space	
	Bearing Surface	...	3'2"		3'2"			8' x 3' B.H. coaming - other particulars as for bridge deck hatchway - Dumber hatches in bridge space.	
FORE AND AFTERS	Number	...			Nil			1 - in P.S. sides of Machinery Casings 4'2" x 4'2"	
	Spacing	...						7'11" x 4'3"	
	Unsupported Lengths	...						3'5" x 5'5"	
	Scantling* and Sketch	...						11 x 3 1/2 B.H. coamings, spacing of cleats 18" inches - 3" Ratchet bands, bearing surface 3" inches - 2 tarpaulins.	
HATCH COVERS	Material	...	P.N.E.						
	Thickness	...	3" B.H.	- do -	- do -	- do -	- do -		
	How fitted	...	3"						
	Bearing Surface	...	3"						
Spacing of Cleats			2'-0"						
Number of Tarpaulins			5.	- do -	- do -	- do -	- do -		
*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:-  
 Double funnel casing, fiddle top closed by plates hinged steel stem covers - two hinged steel covers (5 fiddles in bridge space) in bridge deck secured by bolts handles -  
 2 - 25 inch diameter ventilators to stockhold - coamings 18'0" high.  
 2 - 36 " " " " " 6'0" "  
 2 - 24 " " " " " 8'0" "

Particulars of Flush Bunker Scuttles:-

- Nil -

Particulars of Companionways:-

- Nil -

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

20 inch diameter ventilators to holds - two - 3'0" coamings, fitted with wooden plugs canvas covers

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

2 1/2 inch diameter air pipes - Swan-neck N.1. - 3'6" high fitted in way of bulwarks - wooden plugs supplied for closing purposes -

Particulars of Gangway Cargo and Coaling Ports:-

no coaling [coaling] door in port starboard sides of bridge space 3'3" x 2'8" secured by strongbacks -

Particulars of Scuppers and Sanitary Discharge Pipes:-  
 Scupper holes 7" x 4" cut in bulkhead plating -  
 All sanitary discharges fitted with steam valves -

Particulars of Side Scuttles:-

11 inch diameter side scuttles fitted with hinged C.I. covers -

Particulars of Guard Rails:-

Guard rails in poop, bridge, forecastle - 3'6" high -

Particulars of Gangways, Lifelines, etc.:-

Helms can be rigged for safety of crew -

RETAIN

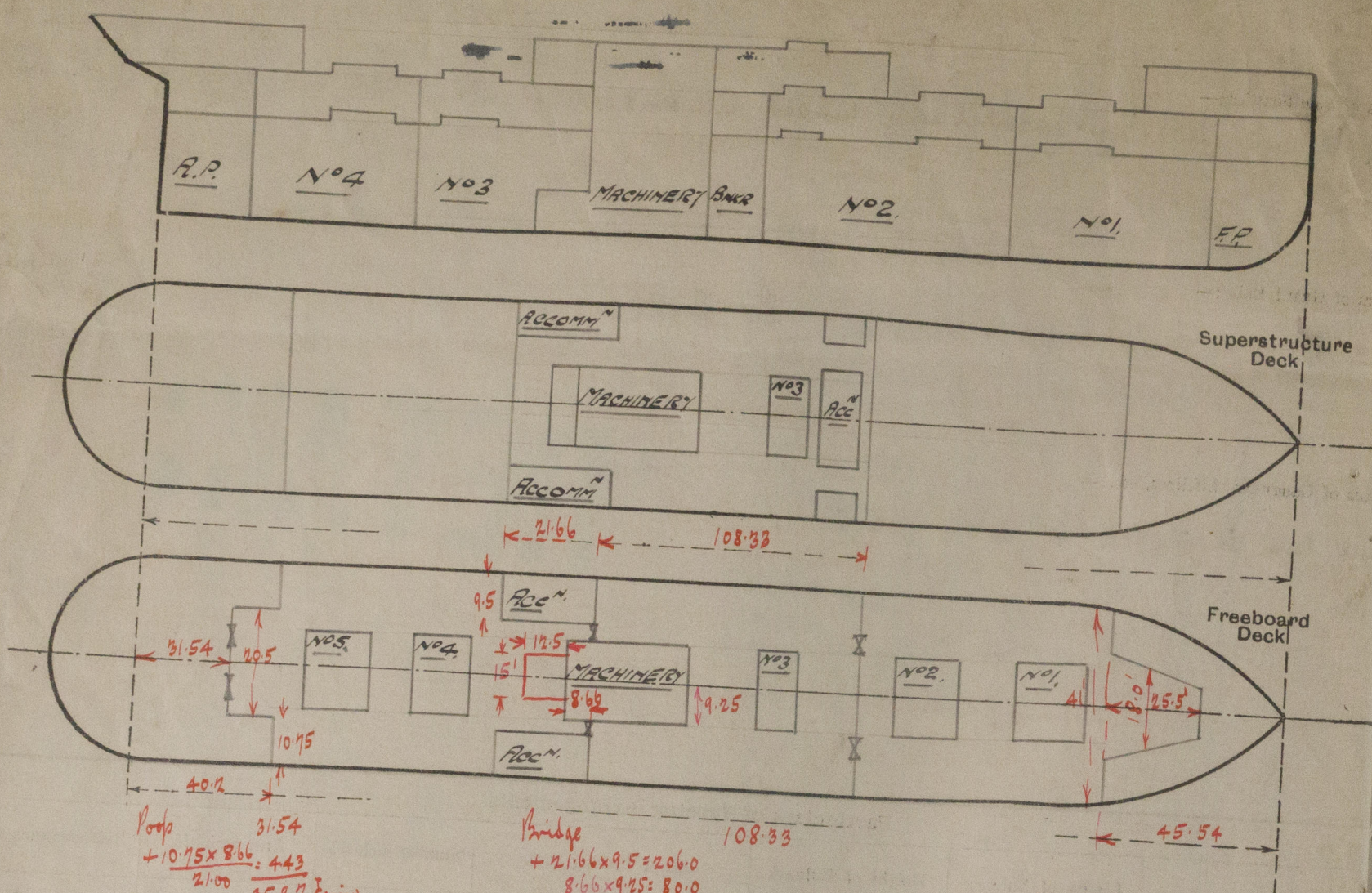
Particulars of Freeing Arrangements.							
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side	
After Well	23'6" 90'92	3'10"	3'6" x 1'9" 3'0" x 1'6"	3	12'5 18'3 18'5	18'5	
Forward Well	21'6" 90	3'10"	3'6" x 1'9" 3'0" x 1'6"	3	12'5 18'3 18'5	18'5	
<p>State position of each freeing port (F. and A. position and height above deck edge) } After Well: Poop 11'6" 32'6" 35'6" 14'0" BRIDGE.</p> <p>State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: } Forward Well: F.C.L. 34'6" 15'9" 29'3" 12'0" BRIDGE.</p> <p>Additional area where sheer is less than standard. } Freeing ports fitted with single bar plate - 11 inches above deck -</p>							

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	3'0" x 7'1/2"	3/8"	6 x 3 x 3/8"	30"	✓	2'3" x 4'9"	18"	7'6"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	3'3" x 1'4"	1/4"	2 1/2 x 3 x 3/8"	36"	✓	4'10" x 6'11"	✓	7'6"
Bridge, Forward Bulkhead	3'0" x 7'1/2"	3/8"	8 x 3 B.H.	30"	18" hatches	2'6" x 5'0"	18"	7'6"
Forecastle Bulkhead	3'0" x 5'1/2"	1/4"	3 x 3 x 3/8"	39"	✓	open	✓	7'6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	3'0" x 5'1/2"	1/4"	2 1/2 x 3 x 3/8"	48"	✓	2'3" x 4'9"	18"	7'6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	3'3" x 7'1/2"	1/4"	3 x 3 x 3/8"	46"		2'6" x 5'0"	18"	7'6"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).  
 Poop Bulkhead ... Two hinged teakwood doors secured by bolts handles -  
 Raised Quarter Deck Bulkhead ...  
 Bridge, After Bulkhead ... 3 inch stanchions in channels full height - angle stiffener at mid-width -  
 Bridge, Forward Bulkhead ... Hinged steel doors secured by double cleats operated from both sides -  
 Forecastle Bulkhead ... Open - no closing appliances - Hinged wood door.  
 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 ... Hinged teakwood door.  
 Deckhouses on Flush Deck Ships ... P.R. casing - protected by accommodation - two hinged teakwood doors to P.R. in bridge space - one on bridge deck secured by bolts handles - steel skylight hand operated -



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



Freeboard deck sheathed in way of walls -

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

$$\begin{aligned} \text{Bridge} & 108.33 \\ & + 21.66 \times 9.5 = 206.0 \\ & 8.66 \times 9.25 = 80.0 \\ & 12.5 \times 7.5 = 93.6 \\ & \frac{379.6}{25.0} + \frac{15.18}{123.51} \text{ Equiv.} \\ & 8.490 \text{ H.} \end{aligned}$$

$$\begin{aligned} \text{Fore} & 45.54 \\ & - \frac{25.5 \times 18}{41} = -11.20 \\ & 34.34 \text{ Equiv.} \end{aligned}$$

$$\begin{aligned} \frac{39.87}{10} &= 3.987 \\ & 34.34 \\ & 5.53 \times 5937 = 3.28 \\ & 45.54 \\ & 39.87 \\ & 5.67/2 \\ & 2.83 \\ & 6.11 \text{ Equiv.} \end{aligned}$$

Particulars taken when vessel was in drydock during S.S. N°2 -

Builder's name and yard number

Names of sister ships

Owners Asiatic Steam Nav Co.

Fee Rs 275/-

Received by me

S. P. P. S.



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