

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 53832.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *Open Poop, Bridge & Forecastle*Port of Survey *Glasgow*Date of Survey *Sept 1933*Name of Surveyor *Norman Dobson*Particulars of Classification *+ AI (Contemplated)  
For Coasting Service Bombay & Goa*

(Type of Superstructures.)				
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<i>PRABHAVATI</i>	<i>British Indian Bombay</i>	<i>✓</i>	<i>555.7</i>	<i>1933</i>
Moulded Dimensions: Length <i>199.0</i> Breadth <i>34.0</i> Depth <i>11'-6"</i>				
Moulded displacement at moulded draught = 85 per cent. of moulded depth <i>1138</i> tons				
Coefficient of fineness for use with Tables <i>602</i> ( <i>Lowest Tables 68</i> )				

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	<i>11'-6"</i> <i>11.50</i>	(a) Where D is greater than Table depth (D - Table depth) R = <i>✓</i>		Moulded Breadth (B)	<i>34'-0"</i>
Stringer plate	<i>2"</i> <i>0.4</i>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <i>(13.27 - 11.66) 1.531 = -2.46"</i>		Standard Round of Beam = $\frac{B \times 12}{50}$	<i>8.16"</i>
Sheathing on exposed deck	<i>2 1/2"</i> <i>12</i>	If restricted by superstructures <i>NIL</i>		Ship's Round of Beam	<i>= 8 1/2 inches</i>
$T \left( \frac{L-S}{L} \right) = 21 \times 5804$				Difference	<i>.34</i>
Depth for Freeboard (D) =	<i>11.66</i>			Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	<i>= .34 \times .7782 = -.07</i>

## DEDUCTION FOR SUPERSTRUCTURES.

Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	Standard Height of Superstructure
Poop enclosed ...	<i>28'-9"</i>	<i>7'-3"</i>			<i>6.00</i>
" overhang ...					" " R.Q.D.
R.Q.D. enclosed ...					Deduction for complete superstructure <i>25.90</i>
" overhang ...					Percentage covered $\frac{S}{L} = 41.96\%$
Bridge enclosed ... <i>open</i>	<i>21.25</i>	<i>10.62</i>	<i>✓</i>	<i>10.62</i>	" $\frac{S_1}{L} = 22.18\%$
" overhang aft <i>open</i>	<i>28.75</i>	<i>14.37</i>	<i>✓</i>	<i>14.37</i>	" $\frac{E}{L} = 22.18\%$
" overhang forward					Percentage from Table, Line A. <i>11.09%</i>
Fore enclosed <i>open</i>	<i>33'-6"</i>	<i>19.16</i>	<i>✓</i>	<i>19.16</i>	(corrected for absence of forecastle (if required))
" overhang ...					Percentage from Table, Line B. <i>14.07%</i>
Trunk aft ...					(corrected for absence of forecastle (if required))
" forward ...					Interpolation for bridge less than 2L (if required) <i>11.09 + (2.98 \times \frac{10.62}{39.80}) = 11.88</i>
Tonnage opening aft ...					Deduction = <i>25.90 \times .1188 = -3.08</i>
" forward					
Total ...	<i>83.50</i>	<i>44.15</i>		<i>44.15</i>	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>29.90</i>	1		<i>29.90</i>	<i>18.0</i>	<i>18.00</i>	1		<i>18.00</i>
1/8 L from A.P. ...	<i>13.30</i>	4		<i>53.20</i>	<i>8.0</i>	<i>8.00</i>	4		<i>32.00</i>
3/8 L " ...	<i>3.29</i>	2		<i>6.58</i>	<i>2.0</i>	<i>2.00</i>	2		<i>4.00</i>
Amidships ...	<i>✓</i>	4		<i>✓</i>	<i>✓</i>	<i>✓</i>	4		<i>✓</i>
3/8 L from F.P. ...	<i>6.58</i>	2		<i>13.16</i>	<i>4.0</i>	<i>4.00</i>	2		<i>8.00</i>
1/8 L " ...	<i>26.61</i>	4		<i>106.44</i>	<i>15.0</i>	<i>15.00</i>	4		<i>60.00</i>
F.P. ...	<i>59.80</i>	1		<i>59.80</i>	<i>42.0</i>	<i>42.00</i>	1		<i>42.00</i>
Total ...				<i>269.08</i>					<i>164.00</i>

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

Mean actual sheer forward = *Deficient (.621)*  
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = *Deficient*  
" " aft of " = *Sheers.*

*Sheer Forward.*  
*Standard Actual.*

6.58	3	19.74	4.00	3	12.00
26.61	3	79.83	15.00	3	45.00
59.80	1	59.80	42.00	1	42.00
		<i>159.37</i>			<i>99.00</i>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{105.08}{18} (.75 - .2098) = +3.15$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Fresh Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient
Ft.	$\Delta = 1011$	
Depth to Freeboard Deck = <i>11.75</i>	Tons per inch immersion at summer load water line	Depth Correction ...
Summer freeboard = <i>2.96</i>	$T = 11.94$	Deduction for superstructures ...
Moulded draught (d) = <i>8.79</i>	Deduction = $\frac{\Delta}{40T}$ inches	Sheer correction ...
Deduction for Tropical freeboard and addition for	$= 2 \frac{1}{4} \left( = \frac{d}{4} \right)$	Round of Beam correction ...
Winter freeboard = $\frac{d}{4}$ inches =		Correction for Thickness of Deck amidships ...
Addition for Winter North Atlantic Freeboard (if required) =		Other corrections, scantlings, etc. to correspond to an assumed all seasons moulded draught of <i>8'9 1/2"</i>
		Summer Freeboard = <i>35.50</i>

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

Tropical Fresh Water Line above Centre of Disc ...	<i>2 1/4"</i>	Tropical Fresh Water Freeboard ...	<i>2'-11 1/2"</i>
Fresh Water Line " " ...	<i>2 1/4"</i>	Fresh Water " " ...	<i>2'-9 1/4"</i>
Tropical Line " " ...	<i>NIL</i>	Tropical " " ...	<i>2'-9 1/4"</i>
Winter Line " " ...	<i>below</i>	Winter " " ...	<i>2'-11 1/2"</i>
Winter North Atlantic Line " " ...	<i>below</i>	Winter North Atlantic " " ...	<i>2'-11 1/2"</i>



Prabhavati

Particulars of fiddley, funnel and ventilator coamings:— *Fiddley, funnel, and Ventilator Coamings and upper room skylight of steel strongly constructed.*

Particulars of Companionways:—

Steel house forward to Crew quarters, Coaming  $18\frac{1}{2}$ " above deck, plating to Shade dk.  
Hinged teak wood door 2" thick.  
One to Forward hold plates to Shade dk Coaming  $18\frac{1}{2}$ " above deck hinged teak wood  
door 2" thick  
One to after hold similar to above.

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

To After peak	1 @ 3" dia	36" in height	above upper dk.	
" Fore "	1 @ 3"	12"	"	Shade dk.
" Oil fuel tanks	3 @ 4"	"	"	
" Cofferdam	1 @ 3"	"	"	
" Double bottom	1 @ 4"	"	"	

Fitted with Copper gauze.

None

Scuppers from freeboard deck cut through stringer angle  
Sanitary discharges from superstructure tween decks fitted with storm valves  
No sanitary discharges or overboard scuppers from space below freeboard deck

No side lights or other openings affect the position of the load line disc

Steel bulwark on Upper Deck.

Stanchions 3'-6" in height spaced 4'-0" apart with 4 rails on shade deck.

None

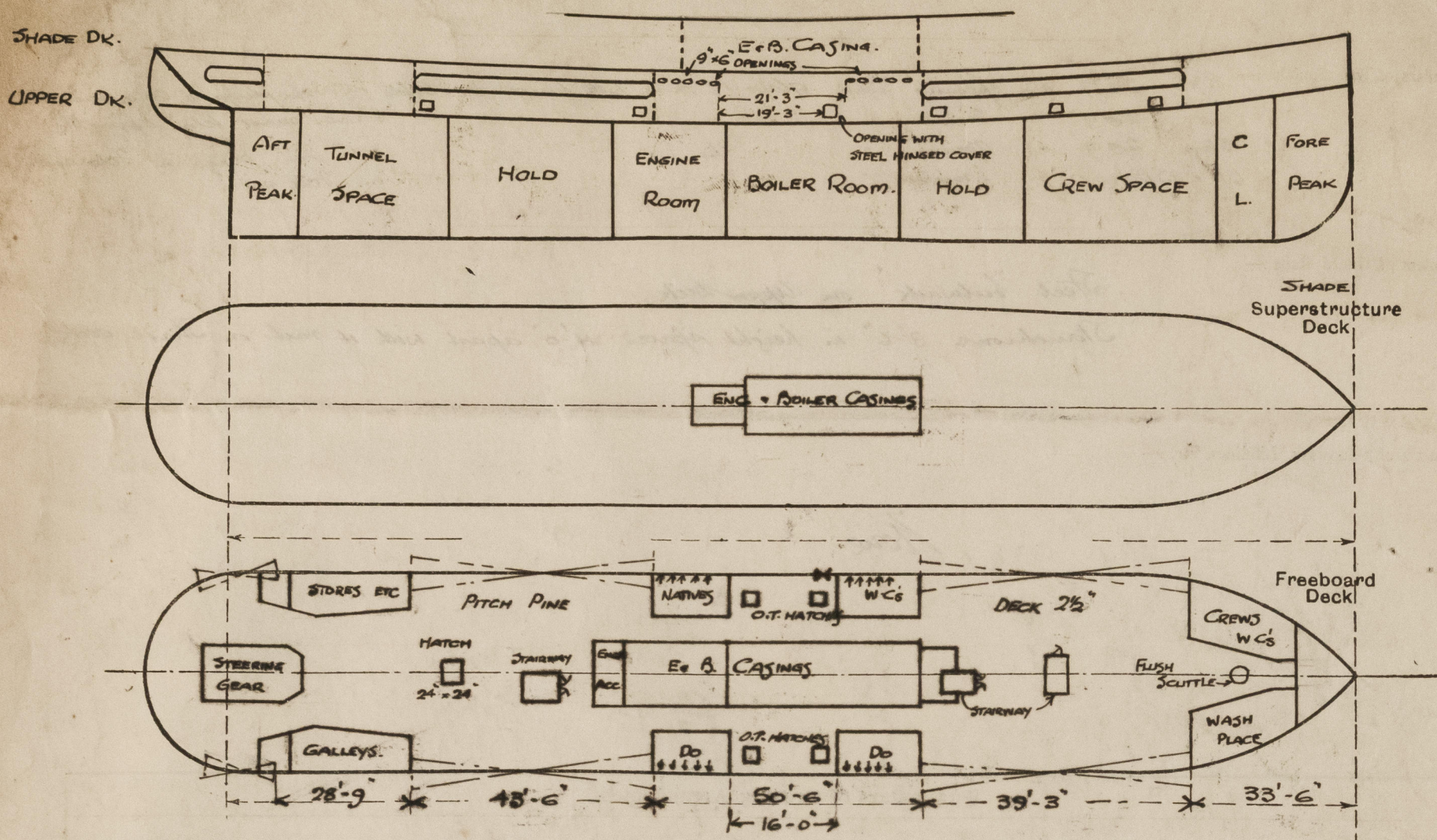
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... ..								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ... ..								
Bridge, Forward Bulkhead ... ..								
Forecastle Bulkhead ... ..								
Trunk, Aft ... ..								
Trunk, Forward ... ..								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	.25	.22	2½ x 2½ x .25	36"	Bkts at 166	4'-11" x 2'-5"	18½"	7'-3"
Exposed Machinery Casings on Super-structure Decks ... ..	.25	.20	2½ x 2½ x .25	30" or 36"	"	"	"	"
Machinery Casings within Superstruc- tures 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 ...	3 Steel doors each side capable of manipulation from both sides
Exposed Machinery Casings on Superstructure Decks ... ..	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	
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 shewn on the following sketches:—



Forecastle  $19.90 \times .621 = 12.36$   
 $13.60 \times .50 = 6.80$   
 $33.50 \quad 19.16$

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

Full Displacement @ 8'-0" Draft actual 888 Tons. Tons per inch = 11.54 Tons  
 " 9'-0" " 1029 " " 12.0 "  
 " 10'-0" " 1176 " " 12.5 "

This vessel is intended for Coasting service and a timber assignment is not required.

Builder's name and yard number

Harland & Wolff Ltd. No 929 G.

Names of sister ships

'CHANDRAYATI' by same builders (No 926 G)

Owners

The Bombay Steam Nav

Fee £

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Received by me



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