

17 FEB 1936

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

*Forecastle and Rana Quarter deck*Port of Survey **Bombay**

(Type of Superstructures.)

Date of Survey *January 21<sup>st</sup> & 24<sup>th</sup> 1936*

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

*Bombay Star**British  
Bombay**145571**637**1920-11*

Name of Surveyor

*H. B. Buttrick*

Moulded Dimensions: Length

*168.0'*

Breadth

*27.5'*

Depth

*13.33'*

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

*1152 (estimated) tons*

Coefficient of fineness for use with Tables

*.770*Particulars of Classification **\*100 A1***S.S. Lms. No. 3-9-32*

## Depth for Freeboard (D)

Moulded depth ... *13.33'*Stringer plate ... *.03'*

Sheathing on exposed deck

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

Depth for Freeboard (D) = *13.36'*

## Depth correction

(a) Where D is greater than Table depth *2.16'*  
(D - Table depth) R = *(13.36 - 11.20) / 1.292*  
*+ 2.66'*(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)

*27.5'*Standard Round of Beam =  $\frac{B \times 12}{50}$  = *6.6"*Ship's Round of Beam = *6"*

Difference

*-.6"*

Restricted to

Correction =  $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$  = *✓ .60 / 4 × .4812 = -.07*

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	<i>63.4</i>	<i>63.4</i>	<i>4'-0"</i>	<i>✓</i>	<i>63.40</i>
" overhang ...	✓				
Bridge enclosed ...	✓				
" overhang aft ...	✓				
" overhang forward ...	✓				
F'ale enclosed ...	<i>23.75</i>	<i>23.75</i>	<i>9'-6"</i>	<i>✓</i>	<i>23.75</i>
" overhang ...	✓				
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" " forward ...	✓				
Total ...	<i>87.15</i>	<i>87.15</i>			<i>87.15</i>

Standard Height of Superstructure *72" ×*" " R.Q.D. *41.44" ×*Deduction for complete superstructure *22.8" ×*Percentage covered  $\frac{S}{L} =$  *.5188*"  $\frac{S_1}{L} =$  *.5788*"  $\frac{E}{L} =$  *.5788*

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 = *22.80 × .3463 = - 7.90%*

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>26.8</i>	1		<i>26.80</i>	<i>40.0</i>	<i>40.00</i>	1		<i>40.00</i>
$\frac{1}{8}$ L from A.P. ...	<i>11.925</i>	4		<i>47.80</i>	<i>18.5</i>	<i>18.96</i>	4		<i>75.84</i>
$\frac{2}{8}$ L " ...	<i>2.95</i>	2		<i>5.9</i>	<i>4.0</i>	<i>4.74</i>	2		<i>9.48</i>
Amidships ...	<i>0</i>	4		<i>0</i>	<i>0</i>	<i>0</i>	4		<i>0</i>
$\frac{3}{8}$ L from F.P. ...	<i>5.89</i>	2		<i>11.78</i>	<i>7.0</i>	<i>6.91</i>	2		<i>13.82</i>
$\frac{4}{8}$ L " ...	<i>23.85</i>	4		<i>95.40</i>	<i>27.5</i>	<i>27.65</i>	4		<i>110.60</i>
F.P. ...	<i>53.6</i>	1		<i>53.60</i>	<i>60.0</i>	<i>60.00</i>	1		<i>60.00</i>
Total ...				<i>241.48</i>					<i>306.0</i>

Mean actual sheer aft = *Excess*Mean actual sheer forward = *Excess*Length of enclosed superstructure forward of amidships = *Nil*" " aft of " = *Nil*

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) = \frac{68.56}{18} \left( .75 - \frac{.2594}{1} \right) = -1.87"$

If limited on account of midship superstructure. *Yes. Nil.*If limited to maximum allowance of 1½ ins. per 100 ft. *✓*

## Deduction for Tropical Freeboard.

## Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = *13.36*Summer freeboard = *1.17*Moulded draught (d) = *12.19*

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = *3.05 = 3*Addition for Winter North Atlantic Freeboard (if required) = *5*

## 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*3*

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$$\frac{.77 + .68}{1.36} = \frac{1.45}{1.36}$$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

+	-
<i>2.79</i>	<i>7.90</i>
<i>-</i>	<i>-</i>
<i>-</i>	<i>.07</i>
<i>-</i>	<i>-</i>
<i>-</i>	<i>-</i>
<i>2.79</i>	<i>7.97</i>

Summer Freeboard = *14.03*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, *Wood, Steel, Deck*:-

Tropical Fresh Water Line above Centre of Disc ...	<i>6"</i>
Fresh Water Line " " ...	<i>3"</i>
Tropical Line " " ...	<i>3"</i>
Winter Line below " " ...	<i>3"</i>
Winter North Atlantic Line " " ...	<i>5"</i>

Tropical Fresh Water Freeboard ...

Fresh Water " " ...

Tropical " " ...

Winter " " ...

Winter North Atlantic " " ...

21 FEB 1936

W491-0111 1/2

18 OCT 1937  
RECEIVED  
20 APR 1936  
RECEIVED



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS						
Description of Hatchway			N <sup>o</sup> 1.	N <sup>o</sup> 2	Bunker hatches on R. Q. D.	
Dimensions of Hatchway			36'0" x 18'0"	40'6" x 18'	3'4" x 2'3". 24" x 32"	
COAMINGS	{	Height above Deck	4'3"	4'3"	Coaming. 3" ledge bars	
		Thickness { Sides	4'4'	4'4'	2 1/2" wood covers. Close	
		{ Ends	7" B.A.	7" B.A.	spaced cleats & 2 tar-	
		Stiffeners ...	10 brackets		paulins.	
HATCH BEAMS	{	Brackets, Stays			Bunker hatch on	
		Number ...	7'6"	4'8 1/2"	Casing Top.	
		Spacing ...			7'3" wide x 14'6"	
		Scantling and Sketch	Angles top & bottom = 4 x 3 x .44	16" x 36" as N <sup>o</sup> 1.	9" B.A. Coaming.	
Bearing Surface			3" x 16"	3"	2 1/2" ledge bars. 2 1/2"	
FORE AND AFTERS	{	Number ...			wood covers. Cleats	
		Spacing ...			spaced 24" covers	
		Unsupported Lengths			fitted fore aft and mid	
		Scantling and Sketch			7'3" long unsupported	
Bearing Surface					10 x 44 x 7 1/2" x 16" x 36" as N <sup>o</sup> 1.	
HATCH COVERS	{	Material ...	Pure		Store room hatch on R. Q. D.	
		Thickness ...	3"		39" x 18" Coaming = 25" x 3"	
		How fitted	Fore aft		2 1/2" ledge bars. 2 1/2" wood	
		Bearing Surface	3" x 4"		cover. Close spaced	
Spacing of Cleats			22-23"		cleats & 2 tarpaulins.	
Number of Tarpaulins			3.		Peaks have bolted w/t	
*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:—  
 Fiddle casing is 7'3" high.  
 Gratings on top have 3" coamings & hinged steel storm covers. Funnel and ventilators are continuous.

Particulars of Flush Bunker Scuttles:—  
 None.

Particulars of Companionways:—  
 None.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—  
 30" Coamings.  
 Wood plugs & canvas covers fitted.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—  
 30" attached to Bulwarks.  
 Canvas covers fitted.

Particulars of Gangway Cargo and Coaling Ports:—  
 None.

## Particulars of Scuppers and Sanitary Discharge Pipes:—

Single storm valves fitted.

## Particulars of Side Scuttles:—

Hinged deadlights fitted.  
 No side scuttles below main deck or R.Q. deck.

## Particulars of Guard Rails:—

One fore-castle only.  
 Lines of adequate height & construction and in efficient condition.

## Particulars of Gangways, Lifelines, etc.:—

No special fittings.  
 Lines can be readily rigged if needed.

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 R.Q. deck	69'0"	36"	27" x 19" 4" x 14" scuppers	4 3	14.8	14.0 ft
Forward Well	80'8" 75'5"	48"	27" x 19" 4" x 14" scuppers	5 4	17.8	16.0 ft
State position of each freeing port ... { After Well:— (F. and A. position and height above deck edge) { Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard.						

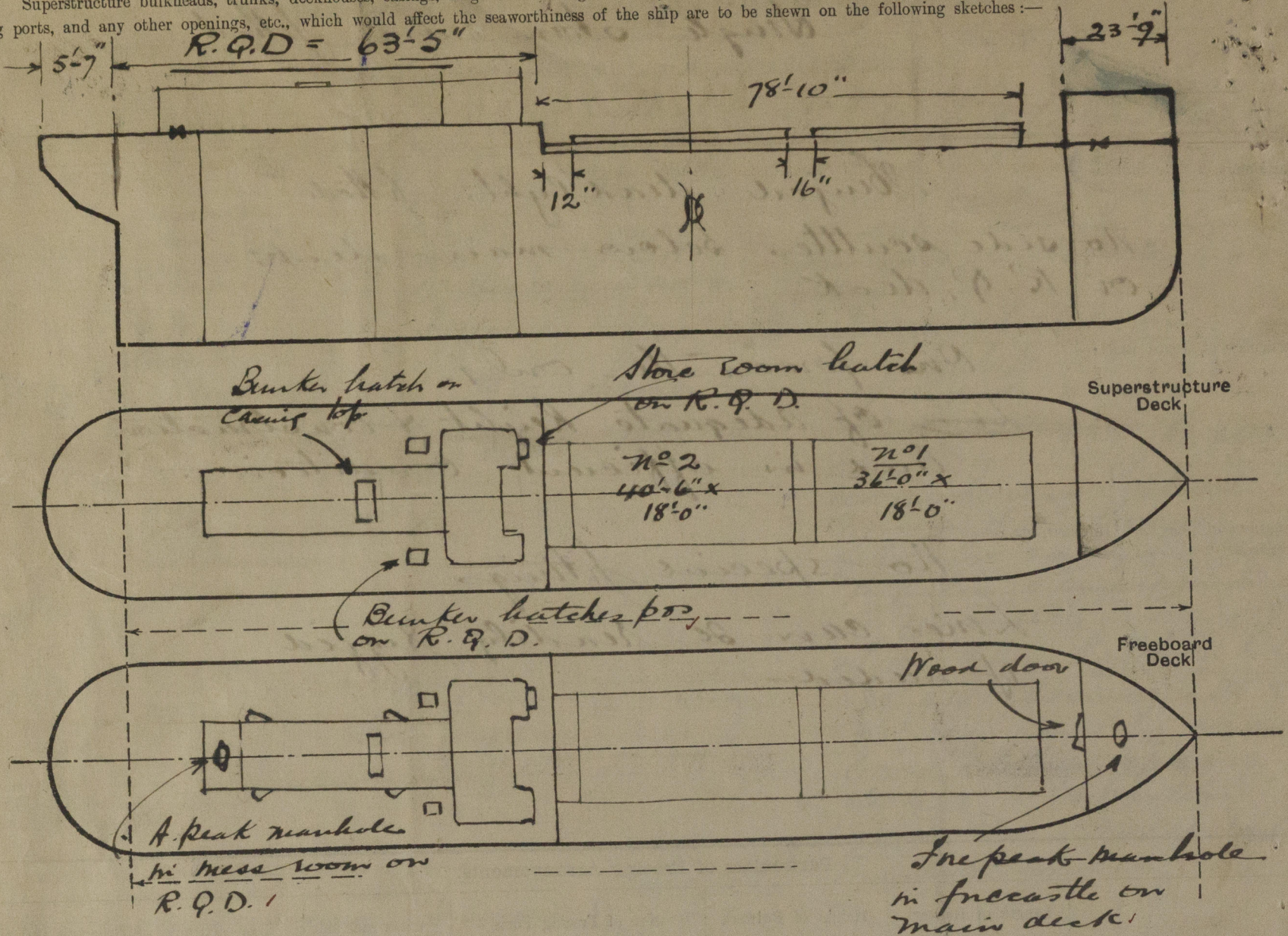
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead	32	32	3 1/2" x 42" with 4 x 3 x 32 angle	4'6"	4 x 3 x 32 lugs	None	✓	48"
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Fore-castle Bulkhead	35	38	3 x 3 x 36	24"	None	20"	20"	7'6"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	28	28	3 x 3 x 36	30"	None	24"	18"	7'3"
Exposed Machinery Casings on Superstructure Decks	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Bridge R.Q. Deckhouse on Free Deck Ship	3	3	3 x 3 x 36	30"	18 x 18 x 3	24"	18"	7'3"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	✓
Raised Quarter Deck Bulkhead	✓ No openings.
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Fore-castle Bulkhead	✓ Wood doors.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓ Steel doors.
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓
Deckhouses on Free Deck Ship	✓ Wood doors.

W491-0111 2/2



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:—



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

Vessel surveyed in drydock.

No displacement figures are available.

It should be noted that the length of the R.Q. deck given on the Tusoard particulars supplied to this office (69'-0") is the overall deck length from the R.Q.D. bulkhead to the counter bulwarks.

Builder's name and yard number

Names of sister ships

Owners

Cambay State.

Fee

£ 310/-

Received by me



© 2020

Lloyd's Register  
Foundation