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Index No. **30623**
(For London Office only.)

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having R.O. Deck, Bridge & Funnel

Port of Survey Bombay

Date of Survey July 24th 26th 1935

Name of Surveyor Obt. Southwell

Particulars of Classification *100 A1

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
<u>OOSTCAPELLE</u>	<u>British Bombay</u>	<u>153801</u>	<u>751</u>	<u>1921</u>

Moulded Dimensions: Length 180 Breadth 28 Depth 14.5

Moulded displacement at moulded draught = 85 per cent. of moulded depth 1348 tons

Coefficient of fineness for use with Tables .760

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... <u>14.5</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(14.53 - 12.00) x 1.385 = +3.5"</u>	Moulded Breadth (B) <u>28.0</u>
Stringer plate ... <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>	Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>6.72</u>
Sheathing on exposed deck <u>✓</u>		Ship's Round of Beam = <u>6.5</u>
$T \left(\frac{L-S}{L} \right) =$		Difference <u>-.22"</u>
Depth for Freeboard (D) = <u>14.54</u>	If restricted by superstructures <u>No.</u>	Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$ <u>✓ $\frac{.22}{4} \times 2968 = +.02$</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	✓				
" overhang ...	✓				
R.Q.D. enclosed ...	<u>51.83</u>	<u>51.83</u>	<u>3' 6"</u>	<u>+3.5</u>	<u>51.83</u>
" overhang ...				<u>3.533</u>	
re enclosed ...	<u>51.33</u>	<u>51.33</u>	<u>7' 0"</u>	✓	<u>51.33</u>
" overhang aft ...					
" overhang forward ...	<u>1.80</u>	<u>.90</u>			<u>.90</u>
F'cle enclosed ...	<u>21.75</u>	<u>21.75</u>	<u>7' 0"</u>	✓	<u>21.75</u>
" overhang ...	<u>1.82</u>	<u>1.35</u>			<u>22.51</u>
Trunk aft ...	✓				
" forward ...	✓				
Tonnage opening aft ...	✓				
" forward ...	<u>127.47</u>	<u>126.57</u>			<u>126.09</u>
Total ...	<u>128.51</u>	<u>127.16</u>			<u>127.16</u>

Standard Height of Superstructure 72" 6.0'

" " R.Q.D. 44.6" 3.533'

Deduction for complete superstructure 24"

Percentage covered $\frac{S}{L} =$.714 70.82

" " $\frac{S_1}{L} =$.706 70.32

" " $\frac{E}{L} =$.706 70.06

Percentage from Table, Line A. 63.07
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. 63.7
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) ✓

Deduction = $24.00 \times .6307 =$ -15.14

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<u>28.0</u>	1		<u>08.0</u>	<u>40.0</u>	<u>41.0</u>	1		<u>40.0</u>
$\frac{1}{4}$ L from A.P. ...	<u>12.46</u>	4		<u>49.84</u>	<u>17.5</u>	<u>18.56</u>	4		<u>70.0</u>
$\frac{2}{4}$ L " ...	<u>3.08</u>	2		<u>6.16</u>	<u>4.0</u>	<u>4.64</u>	2		<u>8.0</u>
Amidships ...	<u>-</u>	4		<u>-</u>	<u>-</u>	<u>-</u>	4		<u>-</u>
$\frac{3}{4}$ L from F.P. ...	<u>6.16</u>	2		<u>12.32</u>	<u>6.5</u>	<u>6.32</u>	2		<u>13.0</u>
$\frac{1}{4}$ L " ...	<u>24.92</u>	4		<u>99.68</u>	<u>25.5</u>	<u>25.28</u>	4		<u>102.0</u>
F.P. ...	<u>56.0</u>	1		<u>56.0</u>	<u>64.0</u>	<u>65.0</u>	1		<u>64.0</u>
Total ...				<u>252.00</u>					<u>297.0</u>

Mean actual sheer aft = 1.07 Sum

Mean standard sheer aft = 1.44 Sum

Mean actual sheer forward = 1.44 Sum

Mean standard sheer forward = 1.44 Sum

Length of enclosed superstructure forward of amidships = .074

" " aft of " = .212

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) =$ -1.13

If limited on account of midship superstructure. Geo. $\frac{.173}{200} \times 1.13 = -.98$

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft. ✓

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 14.53

Summer freeboard = 0.69

Moulded draught (d) = 13.84

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 3.46 = 3 $\frac{1}{2}$

Addition for Winter North Atlantic Freeboard (if required) = 5 $\frac{1}{2}$

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$ 1557

Tons per inch immersion at summer load water line

$T =$ 10.3

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

= 3.78

= 3 $\frac{3}{4}$

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. ...

+	-
<u>3.50</u>	<u>-</u>
<u>-</u>	<u>15.14</u>
<u>-</u>	<u>7.02</u>
<u>0.02</u>	<u>-</u>
<u>-</u>	<u>-</u>
<u>-</u>	<u>-</u>
<u>3.52</u>	<u>16.12</u>

Summer Freeboard = 8.36

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, 1, Steel, Deck: -

Tropical Fresh Water Line above Centre of Disc ... 7 $\frac{1}{4}$

Fresh Water Line " " ... 3 $\frac{3}{4}$

Tropical Line " " ... 3 $\frac{1}{2}$

Winter Line below " " ... 3 $\frac{1}{2}$

Winter North Atlantic Line " " ... 5 $\frac{1}{2}$

Tropical Fresh Water Freeboard ...

Fresh Water " ...

Tropical " ...

Winter " ...

Winter North Atlantic " ...

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MAKING FOR RECEIVED

RECEIVED

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS				
Description of Hatchway	Nº 1.	Nº 2.	Nº 3.	After peak hatch on R.Q.D. 48"x52" 18"x3"
Dimensions of Hatchway	12'10"x16'6"	20'2"x16'6"	22'0"x16'6"	Coaming. 3" ledge
COAMINGS				Sass. 2 1/2" wood covers & two tarpaulins
Height above Deck	30"	30"	34"	bleats spaced 20"
Thickness Sides	3/4"	3/4"	3/4"	Bunker hatch on bulge
Stiffeners	7" B.A.	7" B.A.	7" B.A.	Deck. 60"x30" 18"x35"
Brackets, Stays	2	2	2	Coaming. 2 1/2" wood covers
HATCH BEAMS				3" ledge Sass. 20" spacing
Number	2	3	3	bleats. Two tarpaulins
Spacing	50 1/2"	60 1/2"	66"	Bunker hatch on casing
Scantling and Sketch	12"x36"	16"x36"	Same as Nº 2	Top. 7'4"x4'6" 11"x3"
Bearing Surface	3" 1/2"x6" plate	3"		Coaming. 3" bars. 2 1/2" wood covers. 3 tarpaulins
FORE AND AFTERS				bleats spaced 22"
Number				Chain locker hatch.
Spacing				17"x17" 8" B.A. coaming
Unsupported Lengths				2 1/2" bolted steel cover.
Scantling and Sketch				
Bearing Surface				
HATCH COVERS				
Material	Plastic			
Thickness	3"			
How fitted	F.A.			
Bearing Surface	3" 1/2" 4"	Same as Nº 1 and 2		
Spacing of Cleats	22"x24"			
Number of Tarpaulins	3			

*Are wood fore and afters steel shod at all bearing surfaces? *Yes.*
 Are battens and wedges efficient and in good condition? *Yes.*
 Are tarpaulins in good condition and in accordance with rule requirements? *Yes.*
 Are lashings provided in accordance with rule requirements? *Yes.*

Particulars of fiddle, funnel and ventilator coamings: *Fiddle openings on casing top = 3" coaming. Single steel cover fitted in all cases. Funnel coaming = 10". Ventilator coaming on casing top = 15". Bunker hatch coaming = 18".*

Particulars of Flush Bunker Scuttles: *None.*

Particulars of Companionways: *Hatch 24"x18" below crew quarters under fore-castle. 9" B.A. coaming with hinged wood cover.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks: *10'0" - 12'0" high on fore deck adequately supported at poop & bridge bulkheads. 24"-30" high elsewhere. Efficiency repairs of closing provided*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks: *19"-20" high to mouth. Canvas covers now being fitted.*

Particulars of Gangway Cargo and Coaling Ports: *None.*

Particulars of Scuppers and Sanitary Discharge Pipes: *Single storm valves fitted - all above main deck.*

Particulars of Side Scuttles: *Single dead light fitted in all cases.*

Particulars of Guard Rails: *None.*

Particulars of Gangways, Lifelines, etc.: *No special fitting. Lines can be readily rigged as required.*

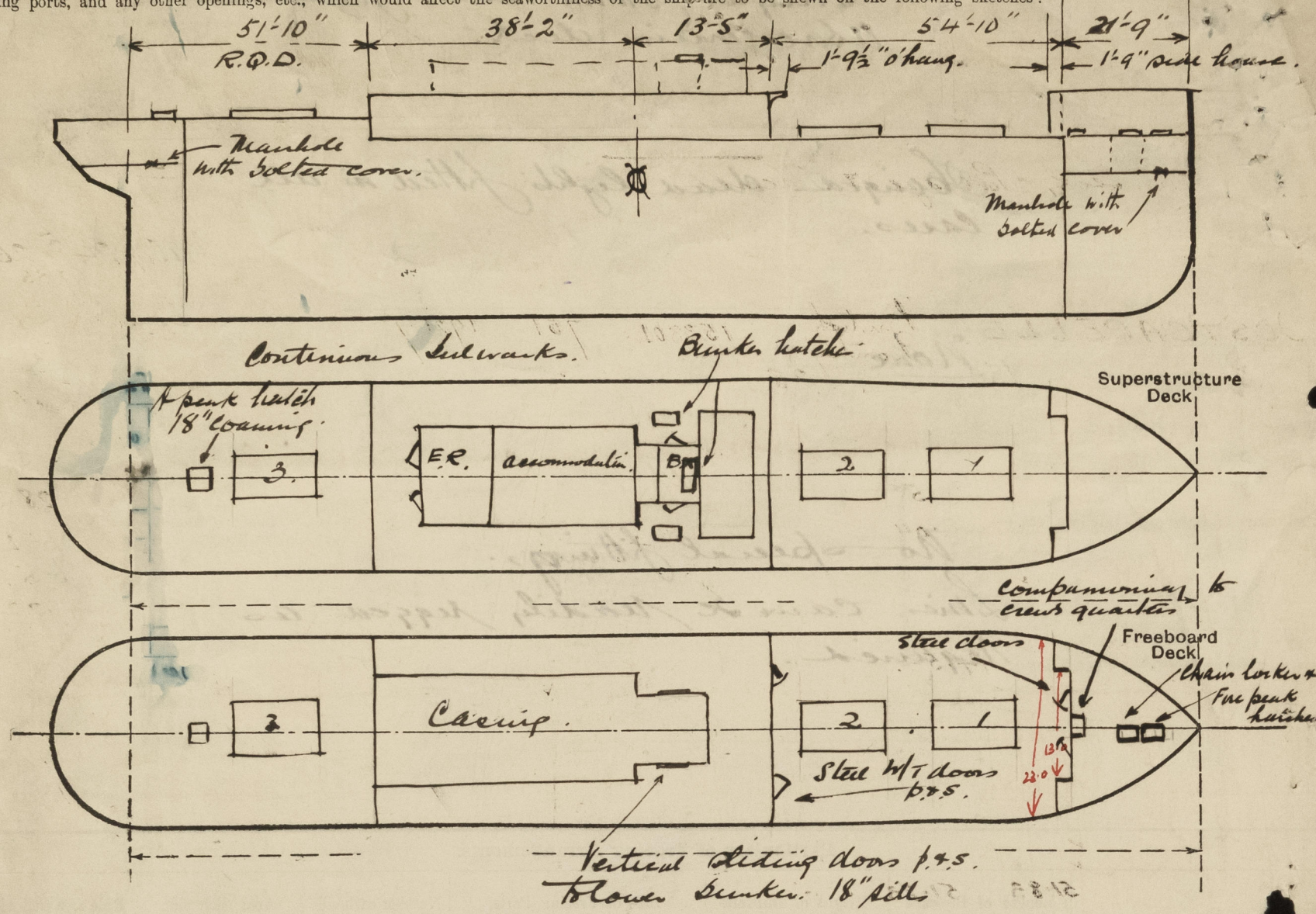
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	59'0"	3'6"	38"x19" 4"x4"	2 3	10.5 sq ft	12.5 sq ft
Forward Well	54'10"	3'6"	38"x19" 4"x4"	3 3	15.33 sq ft	12 sq ft

State position of each freeing port ... After Well: *Equidistant - 8"*
 (E. and A. position and height above deck edge) Forward Well: *Shutters.*
 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
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead	3	3	3"x3"x35"	28"	None.	None.	✓	3'6"
Bridge, After Bulkhead	3	3	3"x3"x35"	28"	None.	None.	✓	3'6"
Bridge, Forward Bulkhead	32	32	6"x3"x4" B.A.	28"	22"x22"x35"	35"	24" above deck.	7'0"
Forecastle Bulkhead	25	25	3"x3"x3"	30"	13"x13"x35"	26"	18"	7'0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓							
Exposed Machinery Casings on Superstructure Decks	3	3	3"x3"x3"	24"	10"x10"x35"	22"	18"	7'2"
Machinery Casings within Superstructures 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	✓ <i>No opening</i>
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓ <i>Hinged steel w/T doors with outside clips only.</i>
Forecastle Bulkhead	✓ <i>Hinged steel doors with single lock</i>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓ <i>Hinged steel doors on after bulk with single locks.</i>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓ <i>Vertical sliding coal doors pps.</i>
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:-



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

Vessel examined in dry dock.
No displacement figures available
T.P.I. stated to be 10 tons at summer draft.

$$\begin{array}{rcl} \text{File } L & = & 21'-9" + 1'-9" = 23'-50 \\ \text{Room } \frac{1'-75" \times 13}{28} & = & \frac{.99}{22'-51 \text{ equivalent}} \end{array}$$

Builder's name and yard number _____
Names of sister ships _____
Owners Thohan Devji Shah & others.
Fee Rs 310/- Received by me _____