

Lloyd's Register of Shipping.  
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker  
having Bridge & trunks forward & aft.  
(Type of Superstructures.)

Ship's Name <u>Indira</u>	Nationality and Port of Registry <u>British Bombay</u>	Official Number <u>144911</u>	Gross Tonnage <u>637</u>	Date of Build <u>1918</u>
Moulded Dimensions: Length <u>170.0</u> Breadth <u>29.83</u> Depth <u>16.23.50</u>		Date of Survey <u>2<sup>nd</sup> September</u>		
Moulded displacement at moulded draught = 85 per cent. of moulded depth		Name of Surveyor <u>H. R. Southwell</u>		
Coefficient of fineness for use with Tables		Particulars of Classification <u>100 A1</u>		

100 A1  
100 A1

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

## 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 ... ..					
„ overhang ... ..					
Bridge enclosed ... ..					
„ overhang aft ... ..					
„ overhang forward ... ..					
„ enclosed ... ..					
„ overhang ... ..					
Trunk aft ... ..					
„ forward ... ..					
Tonnage opening aft ... ..					
„ „ forward ... ..					
Total ... ..					

Standard Height of Superstructure \_\_\_\_\_  
„ „ R.Q.D. \_\_\_\_\_  
Deduction for complete superstructure \_\_\_\_\_  
Percentage covered  $\frac{S}{L} =$   
„ „  $\frac{S_1}{L} =$   
„ „  $\frac{E}{L} =$   
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 =

## SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
P. ... ..		1		<u>46</u>		1	
„ from A.P. ... ..		4		<u>21.5</u>		4	
„ „ ... ..		2		<u>5.0</u>		2	
„ midships ... ..		4		<u>7.5</u>		4	
„ from F.P. ... ..		2		<u>31.5</u>		2	
„ „ ... ..		4		<u>64</u>		4	
F.P. ... ..		1				1	
Total ... ..							

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

If limited on account of midship superstructure.

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 = \_\_\_\_\_ Ft.  
Summer freeboard = \_\_\_\_\_  
Moulded draught (d) = \_\_\_\_\_

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

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 = \_\_\_\_\_

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. ... ..

+	-

Summer Freeboard =

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

Existing freeboard  
re-designed as  
described by  
Surveyor

Tropical Fresh Water Line above Centre of Disc ... .. 52"  
Fresh Water Line " " ... .. 32"  
Tropical Line " " ... .. 2"  
Winter Line below " " ... .. 2"  
Winter North Atlantic Line " " ... .. 4"

Tropical Fresh Water Freeboard ... ..  
Fresh Water " " ... ..  
Tropical " " ... ..  
Winter " " ... ..  
Winter North Atlantic " " ... ..



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
18'9" x 14'0" wide.									
Description of Hatchway		1.		2		3.			
Dimensions of Hatchway		18'0" A. x 17'10" F.		18'0" x 19'0"		18'0" x 19'0"			
COAMINGS	Height above Deck	46"		46"		56"		After peak hatch on main deck. 30" x 30". 18" coaming. 32" plating. Riveted steel cover with 16" x 12 manhole with bolted cover. Fore peak hatch. 24" dia. 7" brass Coaming. 38" thick. Angled steel w/t. Cover & locking bar. Chain locker hatch. 20 1/2" dia x 3 plate. 12" coaming with 2 1/2" angle ring. Riveted on. Bolted steel cover.	
	Thickness	3/45		Same as		Same as			
	Sides	7" B.A.		Nº1.		Nº1.			
	Stiffeners	3				2			
HATCH BEAMS	Brackets, Stays								
	Number	3				3			
	Spacing	4' 5 1/2"		Same as		4' 8"			
	Scantling and Sketch	4" x 3" x 4" angle		Nº1.		4 1/2" x 3" x 4 1/2"			
FORE AND AFTERS	Bearing Surface	24" x 38" plate. 3"				22 1/2" x 36" 3"			
	Number								
	Spacing								
	Unsupported Lengths								
HATCH COVERS	Scantling and Sketch								
	Bearing Surface								
	Material	1 Pine.		Same as		Same as			
	Thickness	2 1/2"		Nº1.		Nº1.			
Spacing of Cleats	How fitted	F and A.							
	Bearing Surface	3" 4"							
	Number of Tarpaulins	22-24							
		3							
*Are wood fore and afters steel shod at all bearing surfaces? <i>Yes.</i>									
Are battens and wedges efficient and in good condition? <i>Yes.</i>									
Are tarpaulins in good condition and in accordance with rule requirements? <i>Yes.</i>									
Are lashings provided in accordance with rule requirements? <i>Yes.</i>									

Particulars of fiddle, funnel and ventilator coamings:—

Fidley coaming are 3" high on bridge deck.  
 Funnel coaming is 26".  
 Angled steel covers are fitted to all gratings.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

One each side of bridge deck.  
 Steel hoods — 5'6" high x 4'3" x 30" wide.  
 28" plating — 3" x 3" x 28" angle frame & stiffeners.  
 Wood door on after side 10" sill.

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

36" Coamings.  
 Wood plug & canvas covers fitted in all cases.

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

30" high on main deck.  
 Canvas covers fitted.

Particulars of Gangway Cargo and Coaling Ports:—

None



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Particulars of Scuppers and Sanitary Discharge Pipes:—

Single storm valves fitted in all cases.

Particulars of Side Scuttles:—

Angled dead lights fitted in all cases. All side lights are in bridge side & front.

Particulars of Guard Rails:—

Bridge deck only. 37" high & of standard design & in efficient condition.

Particulars of Gangways, Lifelines, etc.:—

No special fittings. Lines can be rigged if required. Crew lines amidships.

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 ...	34'-3"	46"-65"	18" x 16" 24" x 13" 4" x 4"	2 4) 3 1)5	10.2 4.33	9.92 10 0 ft.
Forward Well ...	72'-8"	38"-60"	18" x 16" 24" x 16" 4" x 4" 24" x 20"	2 2) 3 3)6 3 1)	10.28 6.33	14.53 15 0 ft.
State position of each freeing port ... } After Well:— Equidistant — 3" (F. and A. position and height above deck edge) } Forward Well:— Bars. 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 ...	✓							
Bridge, After Bulkhead ...	.28	.28	3" x 3" x .28	30"	None.	24"	20"	7'-0"
Bridge, Forward Bulkhead ...	.32	.32	6 1/2" x 3" x .4 BA.	28"	14" x 12" x .5"	None	✓	7'-0"
Forecastle Bulkhead ...	✓							
Trunk, Aft ...	✓ .48	.48	3" x 3" x .38	24"	None	None	✓	38"
Trunk, Forward ...	✓ .48	.48	3" x 3" x .38	24"	None	None.	✓	36"
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Superstructure Decks ...	✓							
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓							
Deckhouses on Flush Deck Ships ...	✓							
Engine Room skylight. 26 plating. 2 1/2" x 2 1/2" x .75 stiffeners. Spread 28". Coaming 14" high.								

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

Poop Bulkhead ...	✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	Angled steel watertight doors with clips inside & out.
Bridge, Forward Bulkhead ...	✓ No openings.
Forecastle Bulkhead ...	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks ...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	✓



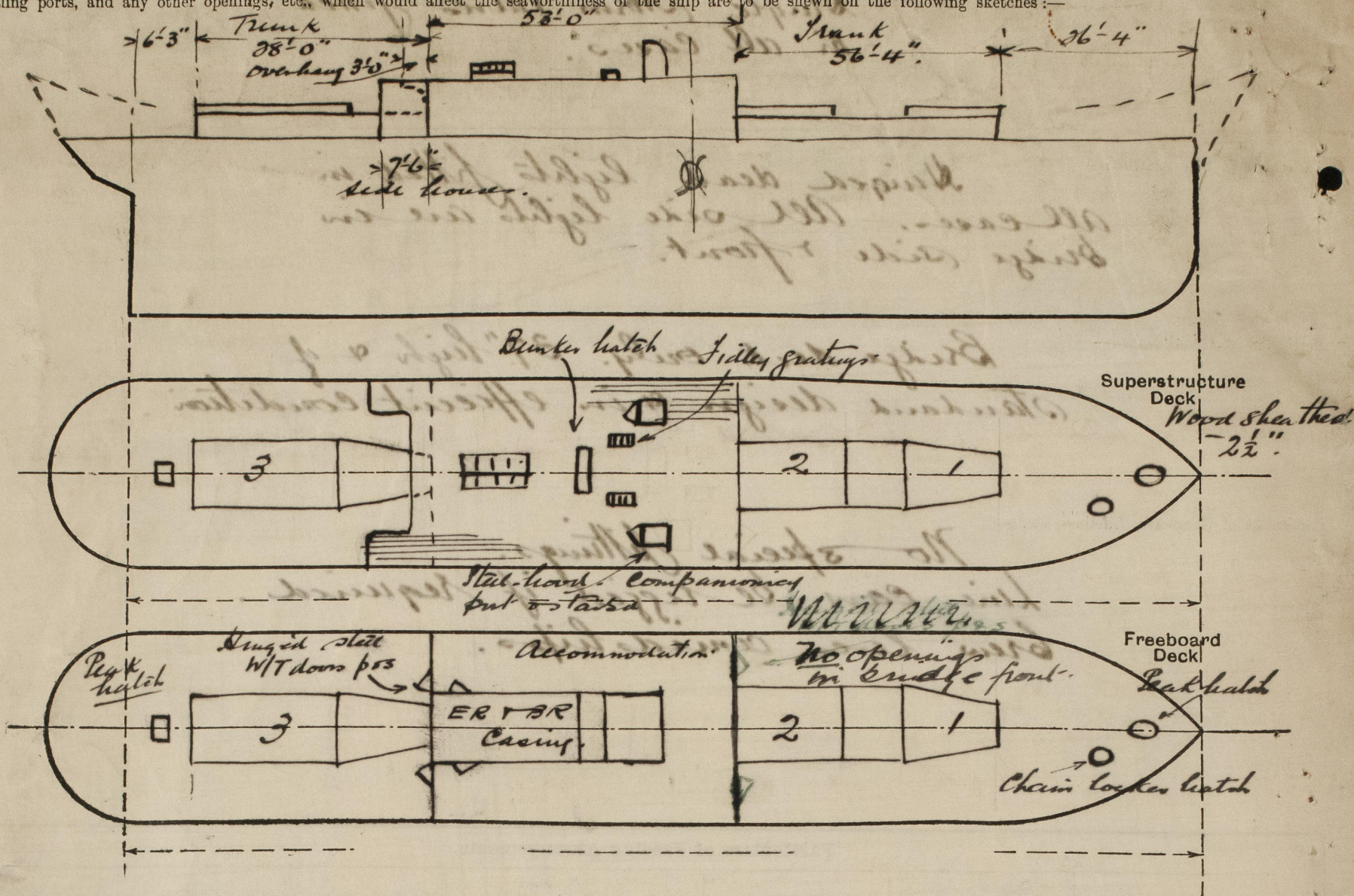
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Indira.

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 shown on the following sketches:—



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

Owners request the re-assignment of the existing freeboard.

No displacement figures available.

The Owners have been advised that additional freeing ports will be required.

*[Signature]*

Builder's name and yard number.

Names of sister ships.

Owners

G. R. Sayer Co.

Fee

£ 310/1

Received by me



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