

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, ~~Sailing Ship~~, Tanker  
having one Deck (Raised Quarter Deck)

Port of Survey Aden

Date of Survey 15<sup>th</sup> December 1932

Name of Surveyor S. C. Buchan

Particulars of Classification + 100 A1  
Well Deck  
SS. ADN. No 3 - 10.20  
SS. ADN. No 2 - 29.

Ship's Name Africa Nationality and Port of Registry British Bombay Official Number 120617 Gross Tonnage 454 Date of Build 1905-10

Moulded Dimensions: Length 159' 0" Breadth 24' 82" Depth 11' 75"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 895' 852 tons

Coefficient of fineness for use with Tables .795 .756

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	11' 75"	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	24' 82"
Stringer plate	8' 20' 03"	(11' 83" - 10' 60") 1.223 =	1.50	Standard Round of Beam = $\frac{B \times 12}{50}$	5' 96"
thing on exposed deck	2' 1/2"	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	6"
T $\left(\frac{L-S}{L}\right)$	21 x 2449 = 05	If restricted by superstructures		Difference	.04
Depth for Freeboard (D) =	11' 83"			Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{.04}{4} \times 2449 = \text{NIL}$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed ...						Standard Height of Superstructure <u>6' 8"</u> <u>6.00</u>
" overhang ...	89' 30"					" " R.Q.D. <u>6' 8"</u> <u>3.393</u>
R.Q.D. enclosed ...	89' 30"	89.30	3' 6" + 2' 2" sh.	-	89.30	Deduction for complete superstructure <u>21.90</u>
" overhang ...	10' 50"					Percentage covered $\frac{S}{L} = 75.51$
Bridge enclosed ...	10' 50"	10.50	6' 8"		10.50	" " $\frac{S_1}{L} = 75.51$
" overhang aft ...			7' 0" + 3' 8" sh.			" " $\frac{E}{L} = 74.88$
" overhang forward ...	20' 27"					Percentage from Table, Line A. <u>69.00</u>
Piece enclosed ...	20' 27"	20.27	5' 6" + 3' 8" sh.	5' 70/60	19.26	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = <u>- 15.11</u>
" forward ...						
Total ...	120.07	120.07			119.06	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P. ...	25.90	1		25.90	45' 0"	22.50	25.70	1	25.70	Mean actual sheer aft = Deficient
1/4 L from A.P. ...	11.52	4		46.08	35' 5"	9.87	11.44	4	45.76	Mean standard sheer aft = > 75% Standard.
1/2 L " ...	2.85	2		5.70	26' 5"	2.47	2.83	2	5.66	Mean actual sheer forward = Excess
Amidships ...		4			13' 0"			4		Mean standard sheer forward
3/4 L from F.P. ...	5.70	2		11.40	0	5.73	5.73	2	11.46	Length of enclosed superstructure forward of amidships = 22' 12.29
1/4 L " ...	23.05	4		92.20	13' 0"	22.91	22.91	4	91.64	" " aft of " = 1' 5.00
F.P. ...	51.80	1		51.80	97' 0"	53.00	53.00	1	53.00	
Total ...				233.08					233.22	

Correction = Difference between sums of products  $\left(\frac{.75 - S}{2L}\right) = \frac{.14}{18} (.75 - .3775) = \text{NIL}$

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 Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.		Displacement in salt water at summer load water line		Correction for coefficient	
Depth to Freeboard Deck =	15' 49"	$\Delta =$		$\frac{756 + 68}{1.36} = 14.36$	16.76
Summer freeboard =	4' 00"	Tons per inch immersion at summer load water line		$\frac{1.36}{1.36} = 1.36$	17.70
Moulded draught (d) =	11' 49"	T = 7.5		Depth Correction ...	1.50
Deduction for Tropical freeboard and addition for		Deduction = $\frac{\Delta}{40T}$ inches		Deduction for superstructures ...	15.11
Winter freeboard = $\frac{d}{4}$ inches =	2' 87" 2 3/4"			Sheer correction ...	
Addition for Winter North Atlantic Freeboard (if required) =	2"			Round of Beam correction ...	
				Correction for Thickness of Deck amidships	43.90
				Other corrections, scantlings, etc.	
				for thickness of wood on R.Q.D.	45.40
				Summer Freeboard =	47.99

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

30 DEC 1932	Tropical Fresh Water Line above Centre of Disc ...	4 1/4"	Tropical Fresh Water Freeboard ...
	Fresh Water Line " " ...	2 3/4"	Fresh Water " " (limited) ...
	Tropical Line " " ...	1 1/2"	Tropical " " ...
	Winter Line below " " ...	2 3/4"	Winter " " ...
	Winter North Atlantic Line " " ...	4 3/4"	Winter North Atlantic " " ...



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
Description of Hatchway			No 1		No 2					
Dimensions of Hatchway			13' 1" x 14' 8"		10' 4 1/2" x 8'					
COAMINGS	{	Height above Deck	2' 4"		1' 9 1/2"					
		Thickness	Sides	3/32		3/32				
			Ends	3/32		3/32				
		Stiffeners	None		3/32					
		Brackets, Stays	"							
HATCH BEAMS	{	Number	1		None					
		Spacing	6' 7"		"					
		Scantling and Sketch	7 1/2" x 4" x 1/2"		"					
			22" x 4"		"					
		Bearing Surface	3"		"					
FORE AND AFTERS	{	Number	3		"					
		Spacing	3' 8"		"					
		Unsupported Lengths	6' 5"		"					
		Scantling and Sketch	6' 5" x 8" x 3/8"		6' 7 1/2" x 8"					
		Bearing Surface	6 3/4"		6 3/4"					
HATCH COVERS	{	Material	Pine		Pine					
		Thickness	2"		2"					
		How fitted	athwartships		athwartships					
		Bearing Surface	2"		2"					
Spacing of Cleats			24 1/2"		24"					
Number of Tarpaulins			3		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:—

Fiddle Vents in efficient construction.  
 Stakehold grating covered by strong hinged covers.  
 Engine skylight of wood, with 7" glass plate, strongly constructed.

## Particulars of Flush Bunker Scuttles:—

None.

## Particulars of Companionways:—

None.

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

Vents { on Forecastle None.  
           on Fore Well Deck None.  
           on Bridge None.  
           on Fiddle Casing & P. { 10 Stakehold 3' 8" 6' 6" high  
   10 Engine Room 2' 6" 10' 3" "

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

all air pipes fitted with screwed caps

## Particulars of Gangway Cargo and Coaling Ports:—

Coaling ports 2 1/2" 2' 2" dia fitted with strong steel covers.  
 Scuttles on deck

## Particulars of Scuppers and Sanitary Discharge Pipes

None fitted below quarter deck.

## Particulars of Side Scuttles:—

## Particulars of Guard Rails:—

Forecastle Rail 3' high 2 rod 5' apart.  
 Bridge Deck Rail 3' high 2 rod 4' apart.

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

Lifelines fitted in fore well for protection of crew.

## Particulars of Freeing Arrangements.

	Length of Bulkhead	Height of Bulkhead	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well Quarter Deck	89.3 84' 8"	3' 6"	24" x 18" 2 off 30" x 18" 3 off	± 5	17 1/4	17.86
Forward Well	24' 6"	4'	12" x 12" 1 off 36" x 18" 1 off	± 3	9.44	10.2
State position of each freeing port from Bridge. { After Quarter Deck 9' 10" 24' 6" } to leading edge of Port. (F. and A. position and height above deck edge) { Forward Well: 3' 6" 4' 5" high } State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Shuttles fitted with strong steel hinges.						
Additional area where sheer is less than standard.						

## Particulars of Superstructures, Trunks, Casings, Deckhouses.

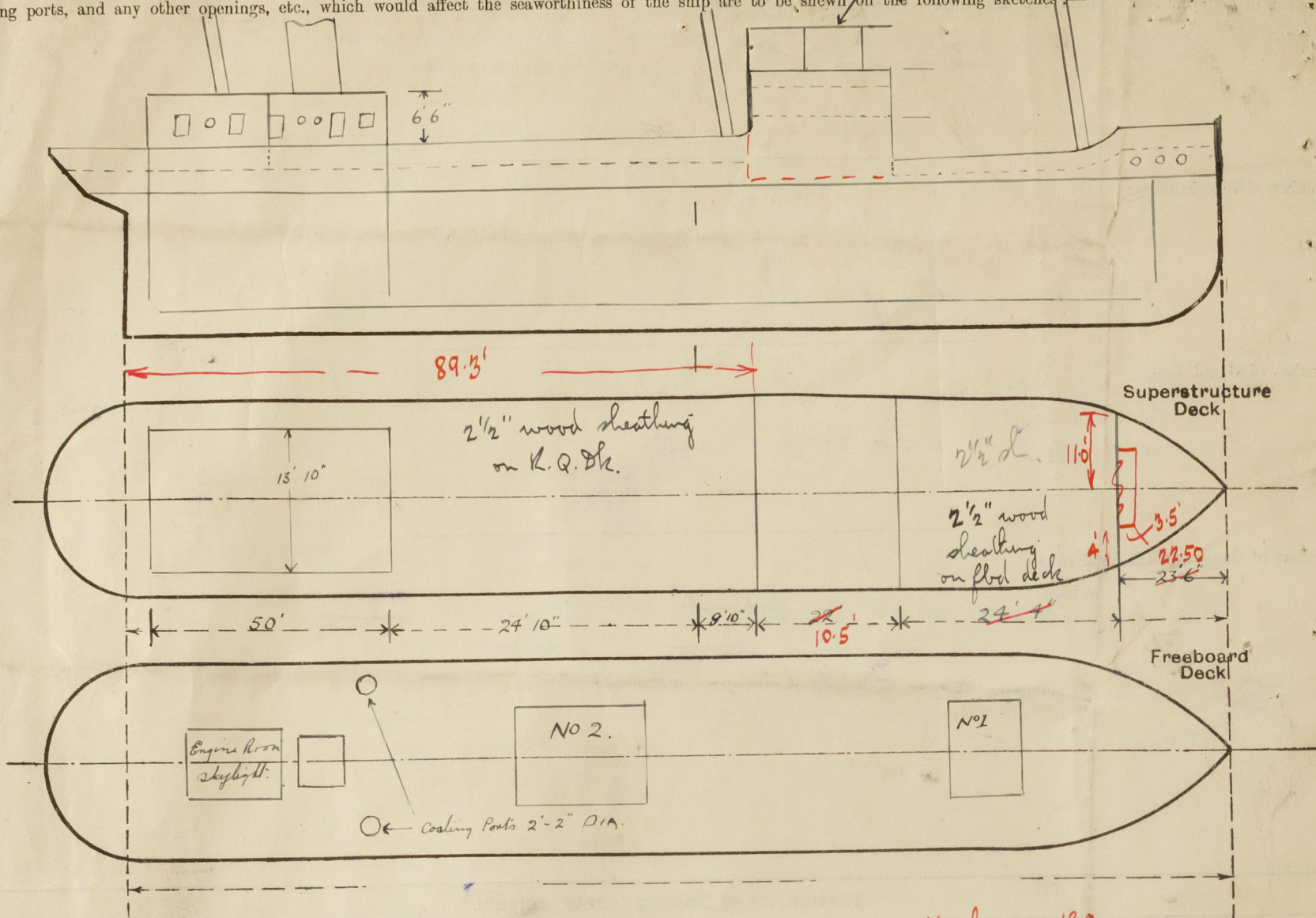
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead								
Raised Quarter Deck Bulkhead		5/16"	2 1/2" x 2 1/2" x 3/8"	2' 6"	Brackets top and bottom	9" dia	—	6' 3"
Bridge, After Bulkhead		5/16"	2 1/2" x 2 1/2" x 3/8"	2' 6"	"	6' 2" x 5' 9"		
Bridge, Forward Bulkhead		5/16"	5 1/2" x 3" x 1/2"	2' 4" x 30"	"	None		
Forecastle Bulkhead	5' 3"	5/16"	3 x 3 x 3/8"	2' 0"	"	3' 8"	1' 2"	
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	6' 6"	5/16"	3 x 3 x 3/8"	2' 3"	Brackets top only	5' x 2'	1' 4"	
Exposed Machinery Casings on Superstructure Decks								
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	No closing appliance of any kind
Raised Quarter Deck Bulkhead	no openings closed Bulkhead 5 ports 9" dia No Road Light fitted
Bridge, After Bulkhead	5/16" steel plate 90 openings
Bridge, Forward Bulkhead	no openings closed Bulkhead, fitted with 1 1/2" dia.
Forecastle Bulkhead	hinged steel door
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	doors fitted on out side, No means of closing from inside
Exposed Machinery Casings on Superstructure Decks	hinged steel door
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:



Locals 19.0  
 $+ 4 \times 3.5 = 14.0$   
 $\frac{1.27}{20.27 \text{ Equiv.}}$

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

Builder's name and yard number W. Walker. Maryport. (11088.)

Names of sister ships Cawsey, Rinslaw Brothers

Owners

Fee £ 5 : 2 : 0

Received by me

S.C. Buckan

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Moulded Dimen

Moulded displac

Coefficient of fir

Depth

Moulded depth

Stringer plate

Sheathing on exposed

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

Depth

Poop enclosed

" overhang

R.Q.D. enclosed

" overhan

Bridge enclosed

" overhan

" overhan

F'cle enclosed

" overhang

Trunk aft

" forward

Tonnage openi

"

Total

Station

A.P. ...

$\frac{1}{6}$  L from A.P. ...

$\frac{2}{6}$  L " ...

Amidships ...

$\frac{2}{6}$  L from F.P. ...

$\frac{1}{6}$  L " ...

F.P. ...

Total ...

Correction =

If limited on

Deduction for

Addition for

Atlantic Fre

Depth to

Summer

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Deduction for Tr

Winter freeb

Addition for Win

required)=

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