

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

GLASGOW REPORT No. 56622

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Raised Quarter Deck, Bridge & Looke.

Port of Survey Glasgow

(Type of Superstructures.)

Date of Survey while building

Ship's Name "BABINDA" Nationality and Port of Registry Australia Melbourne. Official Number 91466 Gross Tonnage 659.08 Date of Build 1936

Name of Surveyor R. Dunsmuir

Moulded Dimensions: Length 174.5 Breadth 30.0 Depth 12.5
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1119 tons
Coefficient of fineness for use with Tables .704

Particulars of Classification 100A1
(CONTEMPLATED)

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>12.5</u>	(a) Where D is greater than Table depth (D - Table depth) R = $(12.53 - 11.63) \times 1.342$ = <u>+ 1.21"</u>	Moulded Breadth (B) <u>30.0</u>
Stringer plate <u>.33</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R = <u>✓</u>	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{30.0 \times 12}{50} = \underline{7.20}$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) = \underline{Nil.}$	If restricted by superstructures <u>✓</u>	Ship's Round of Beam = <u>9.0</u>
Depth for Freeboard (D) = <u>12.53</u>		Difference <u>Excess = 1.80</u>
		Restricted to
		Correction = $\frac{Diff}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.80}{4} \times 1.596 = \underline{- .07"}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Deep enclosed					
" overhang					
R.Q.D. enclosed	<u>102.66</u>	<u>102.66</u>	<u>3'-9"</u>	<u>✓</u>	<u>102.66</u>
" overhang					
Bridge enclosed	<u>11.0</u>	<u>11.00</u>	<u>7'-3"</u>	<u>✓</u>	<u>11.00</u>
" overhang aft					
" overhang forward	<u>32.69</u>	<u>32.69</u>	<u>7'-3"</u>	<u>✓</u>	<u>32.69</u>
F'cle enclosed } <u>SEE</u>	<u>35.48</u>	<u>32.69</u>	<u>7'-3"</u>	<u>✓</u>	<u>32.69</u>
" overhang } <u>SKETCH</u>	<u>.65</u>	<u>.32</u>			<u>.32</u>
Tank off					
" forward					
Tonnage opening off					
" forward					
Total	<u>147.00</u>	<u>146.67</u>			<u>146.67</u>

Standard Height of Superstructure 6.00
" " R.Q.D. 3.496
Deduction for complete superstructure 23.45
Percentage covered $\frac{S}{L} = \frac{84.24}{100} = 84.24\%$
" " $\frac{S_1}{L} = \frac{84.04}{100} = 84.04\%$
" " $\frac{E}{L} = \frac{84.04}{100} = 84.04\%$
Percentage from Table, Line A. 80.31%
(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 = 23.45 \times 80.31 = - 18.83

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>27.45</u>	<u>1</u>		<u>27.45</u>	<u>30.0</u>	<u>33.05</u>	<u>1</u>		<u>33.05</u>
$\frac{1}{2}$ L from A.P.	<u>12.21</u>	<u>4</u>		<u>48.84</u>	<u>13.25</u>	<u>14.71</u>	<u>4</u>		<u>58.84</u>
$\frac{1}{2}$ L "	<u>3.02</u>	<u>2</u>		<u>6.04</u>	<u>3.25</u>	<u>3.64</u>	<u>2</u>		<u>7.28</u>
Amidships	<u>✓</u>	<u>4</u>		<u>✓</u>	<u>0</u>	<u>✓</u>	<u>4</u>		<u>✓</u>
$\frac{1}{2}$ L from F.P.	<u>6.04</u>	<u>2</u>		<u>12.08</u>	<u>6.5</u>	<u>6.50</u>	<u>2</u>		<u>13.00</u>
$\frac{1}{2}$ L "	<u>24.42</u>	<u>4</u>		<u>97.68</u>	<u>26.5</u>	<u>26.50</u>	<u>4</u>		<u>106.00</u>
F.P.	<u>54.90</u>	<u>1</u>		<u>54.90</u>	<u>60.0</u>	<u>60.00</u>	<u>1</u>		<u>60.00</u>
Total				<u>246.99</u>					<u>278.17</u>

Mean actual sheer aft = Excess
Mean standard sheer aft = Excess
Mean actual sheer forward = Excess
Mean standard sheer forward = Excess
Length of enclosed superstructure forward of amidships = > 1L
" " aft of " = > 1L

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{31.18}{18} \left(.75 - \frac{142.12}{174.5} \right) = \underline{- .57"}$

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 = 16.28
Summer freeboard = 3.92
Moulded draught (d) = 12.36

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.09 = 3"

Addition for Winter North Atlantic Freeboard (if required) = 3" + 2" = 5"

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 1340$
Tons per inch immersion at summer load water line
 $T = 10.53$

Deduction = $\frac{\Delta}{40 T}$ inches
= $\frac{1340}{40 \times 10.53} = 3.18" = \underline{3\frac{1}{2}"}$

DRAFT 12'-6" FULL DISP(SW) 1300 TONS. T.P.I. 10.2

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction	<u>1.21</u>	<u>-</u>
Deduction for superstructures	<u>-</u>	<u>18.83</u>
Sheer correction	<u>-</u>	<u>.57</u>
Round of Beam correction	<u>-</u>	<u>.07</u>
Correction for Thickness of Deck amidships	<u>45.00</u>	<u>-</u>
Other corrections, scantlings, etc.	<u>-</u>	<u>-</u>
	<u>46.21</u>	<u>19.47</u>

Summer Freeboard = 46.04

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

Tropical Fresh Water Line above Centre of Disc	<u>3\frac{1}{2}"</u>	Tropical Fresh Water Freeboard	<u>3'-11"</u> (Limited)
Fresh Water Line " "	<u>3\frac{1}{2}"</u>	Fresh Water " "	<u>3'-7\frac{3}{4}"</u>
Tropical Line " "	<u>Nil</u>	Tropical " "	<u>3'-11"</u> (Limited)
Winter Line below " "	<u>3"</u>	Winter " "	<u>4'-2"</u>
Winter North Atlantic Line " "	<u>5"</u>	Winter North Atlantic " "	<u>4'-4"</u>

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
UPPER DECK - RAISED QUARTER DECK									
Description of Hatchway	...	...	...	...	...	...	...	...	...
Dimensions of Hatchway	...	...	...	...	...	...	...	...	...
COAMINGS	Height above Deck	...	39"	42"	18"				
	Thickness	...	42"	42"	36"				
	Sides	...	42"	42"	36"				
	Stiffeners	...	7 x 3 x 40	7 x 3 x 40	36"				
HATCH BEAMS	Number	...	4	6	FITTED WITH HINGED STEEL W.T. COVER				
	Spacing	...	5' 2 1/2"	5' 3 1/2"					
	Scantling and Sketch	...	12" x 32"	11" x 30"	SECURED WITH CLIPS				
	Bearing Surface	...	3 x 3 x 42	3 x 3 x 42					
FORE AND AFTERS	Number	...							
	Spacing	...							
	Unsupported Lengths	...							
	Scantling and Sketch	...							
HATCH COVERS	Material	...	SOLID WOOD COVERS						
	Thickness	...	2 1/2"						
	How fitted	...	FITTED FORE & AFT						
	Bearing Surface	...	3"	3"					
Spacing of Cleats	...	...	22"	22"					
Number of Tarpaulins	...	...	2	2					

*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:—

Engine Skylight of Steel, strongly constructed.
 Funnel & Vent Coamings efficient.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

Companion to Bridge Space, P. Side of Bridge House, enclosed in steel house.
 Opening closed with solid hinged teak door & having sill 15" above deck.
 Door workable from both sides.

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

FOCLE DECK 1-4" V beam 36" x 30"; 1-6" V beam 36" x 30" & 4-9" V beam 36" x 32" to Fockle, Tween D⁵, & Hold.
 WELL DECK 1-12" V (P&S) beam 36" x 34" to Hold.
 BRIDGE DECK 1-4" V & 4-6" V beam 30" x 30" to Bridge Space.
 R. Q⁵ DECK 1-12" V (P&S) beam 36" x 34" to Hold.
 all ventilators in accordance with Rule requirements, & fitted with wood plugs & canvas covers.

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

FOCLE DECK 1-4" M1 to Fore Peak Tank. 18" above deck.
 Fore Well. 1-1 1/2" M1 & 1-4" M1 (P&S) to No. 1 D.B. Tank. 36" above deck.
 Q⁵ DECK 1-4" M1 (P&S) to No. 2 D.B. Tank. 1-2 1/2" M1 (P&S) to Fresh Water D.B. Tank. 1-4" M1 (P&S) to Oil Fuel D.B. Tank. 1-2" M1 (P&S) to Oil Fuel wing Tanks. 1-2" M1 to After Peak Tank. All 30" above deck.
 Air Pipes to Oil Fuel Tanks fitted with gauge, elsewhere canvas covers fitted.

Particulars of Gangway Cargo and Coaling Ports:—

None.

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Particulars of Scuppers and Sanitary Discharge Pipes:—
 FOCLE SPACE Sail pipe from W.C. through side above Fore D⁵, fitted with storm valve.
 2" Scuppers from Crew Quarters, etc. carried through side below Fore D⁵, fitted with storm valve & having plug at inner end.
 BRIDGE SPACE Sail pipe from W.C. through side above Fore D⁵, fitted with storm valve.
 2" Scuppers from Bridge Space, through side below Fore D⁵, fitted with storm valve & plug at inner end.
 QUARTER DECK Sail pipe from W.C. in Engine Room, through side below Q⁵ Deck, fitted with storm valve.
 2" Scuppers from Fore, Mess Room, Wash Place, Store Spaces & Accommodation, through side below Q⁵ Deck, fitted with storm valve, & having plug at inner end.

Particulars of Side Scuttles:—

FOCLE 10" Dia. Sidelights, & fitted with deadlights.
 BRIDGE 10" Dia. lights on Bridge Front & Bridge End Bld. No deadlights.
 No sidelights at Bridge sides.
 All sidelights of substantial construction.

Particulars of Guard Rails:—

FOCLE Open rail 3'6" high with 3 rods & stanchions spaced 5'0" apart.
 BRIDGE Steel Bulwark.

Particulars of Gangways, Lifelines, etc.:—

Arrangements provided for rigging lifeline (Prod) in Forward well.

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 ⁵ DECK	102' - 8"	3' - 6"	3'3" x 1'7"	4	20.56 sq. ft.	20.53 sq. ft.
Forward Well	25' - 8"	3' - 9"	2'2" x 1'6"	3	9.75 sq. ft.	9.07 sq. ft.

State position of each freeing port ... After Well: 13'0"; 28'4"; 46'0"; 72'0" from after end of Bridge. 4" above deck.
 (F₁ and A₁ position and height above deck edge) Forward Well: 1'3"; 9'6"; 18'0" from Bridge Front. 9" above deck.
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Fitted with hinged steel shutters.
 2 bars fitted in R. Q⁵ DECK Ports. 1 Bar fitted in Forward Well Ports.
 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	30 PLATING		ANG. 3 1/2 x 2 1/2 x 31	38"	None	None	✓	7' - 5"
Bridge, After Bulkhead								
Bridge, Forward Bulkhead	30 PLATING		ANG. 5 1/2 x 3 x 32	30"		None	✓	7' - 5"
Forecastle Bulkhead	25 PLATING		ANG. 3 1/2 x 2 1/2 x 25	28" & 30"	None	4'6" x 1'9"	18"	7' - 5"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	18 x 30	26	ANG. 3 x 2 1/2 x 28	30"	Brackets at top	4'3" x 1'10"	18"	7' - 5"
Exposed Machinery Casings on Superstructure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships								

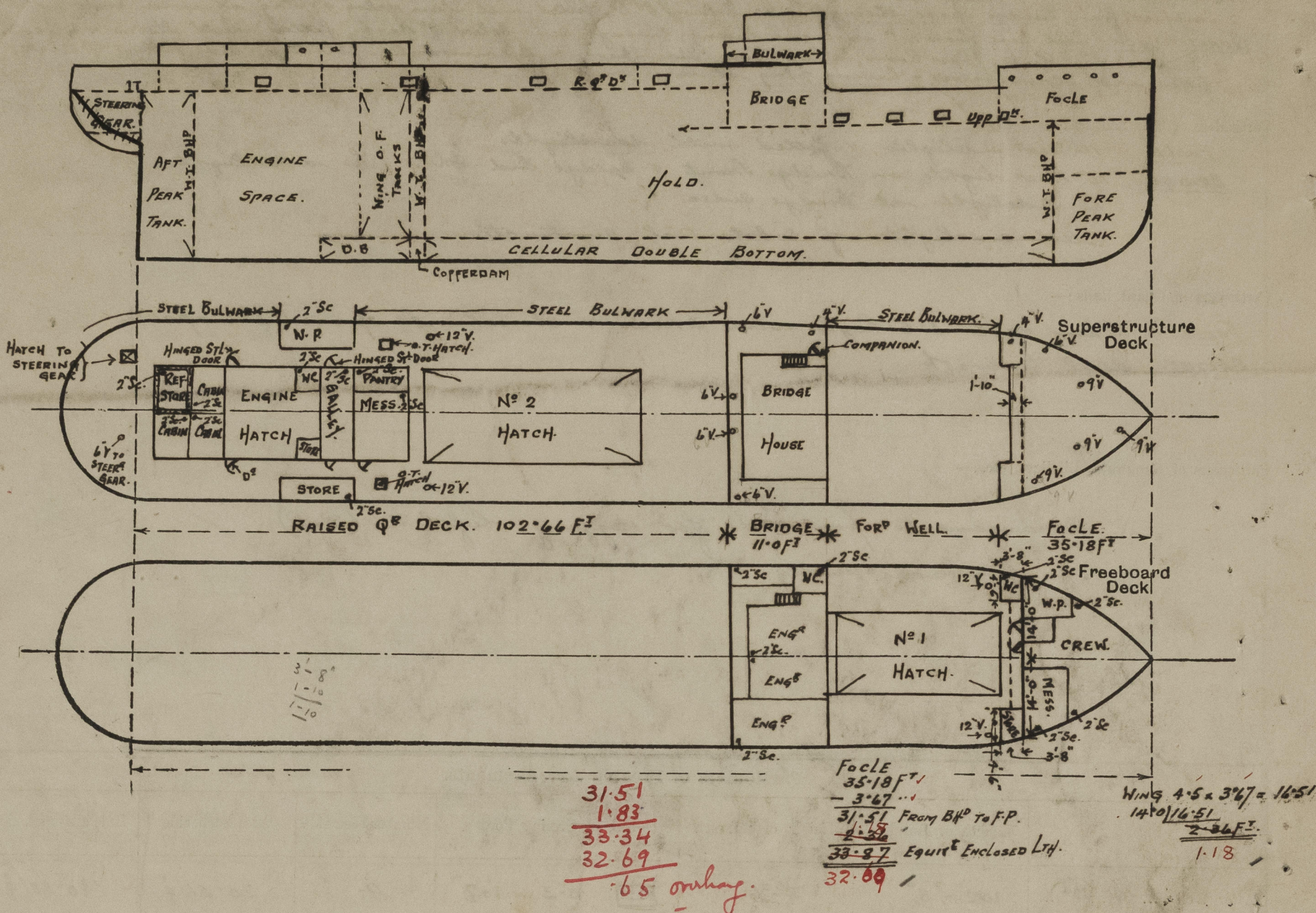
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead		
Raised Quarter Deck Bulkhead	✓	
Bridge, After Bulkhead		
Bridge, Forward Bulkhead	✓	
Forecastle Bulkhead		
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Hinged teak doors.	Manipulated from both sides.
Exposed Machinery Casings on Superstructure Decks	Hinged steel doors.	Manipulated from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances		
Deckhouses on Flush Deck Ships		

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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:—

This vessel has been built in accordance with the Approved Plans & in general conformity with the Society's Rules for the class contemplated. The vessel is for the Australian Coasting Service. Freeboard Request attached.

Approved Plans of Midship Section & Profile & Decks are forwarded for reference.

Builder's name and yard number *Scott & Sons (Bowling) N° 334*

Names of sister ships *Practically similar to M.V. "GALE" Glas Freeb^d Rep. N°.*

Owners *The Australasian United Steam Navigation Co. Ltd*

Est-Fee £ *8* : *0* : *0*

Received by me

NO Fees have been charged, pending the arrangement

the Authorities, of the Australian Scale of Fees.



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