

Rpt. C.11.

LOYD'S REGISTER OF SHIPPING.  
SURVEYS FOR FREEBOARD.

22 JUL '35  
Index No. 27000  
(For London Office only.)

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~  
having one deck (steel)  
Poof. Bridge and Forecasts.  
(Type of Superstructures.)

Ship's Name <u>ARONA</u> <u>COLON</u>	Nationality and Port of Registry <u>BRITISH</u> <u>MEBIAURNE</u>	Official Number <u>142680</u>	Gross Tonnage <u>3116</u>	Date of Build <u>1918-10</u>
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Moulded Dimensions: Length 330' 9" Breadth 46' 6" Depth 25' 6"  
Moulded displacement at moulded draught = 85 per cent. of moulded depth 7247 tons  
Coefficient of fineness for use with Tables .761

Port of Survey SYDNEY A.S.N.  
Date of Survey 14/5/35. 21/5/35. 10/6/35.  
Name of Surveyor Jas. C. Christie  
Particulars of Classification 100 A1  
S.S. 510. H.S. 7.31

<b>Depth for Freeboard (D)</b> Moulded depth ... .. <u>25' 6"</u> Stringer plate ... .. <u>.038</u> Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = <u>25.54</u>	<b>Depth correction</b> (a) Where D is greater than Table depth (D - Table depth) R = $(25.54 - 22.05) \times 2.544 = + 8.88$ <u>3.49</u> (b) Where D is less than Table depth (if allowed) (Table depth - D) R = If restricted by superstructures	<b>Round of Beam correction</b> Moulded Breadth (B) <u>46.5</u> Standard Round of Beam = $\frac{B \times 12}{50} =$ <u>11.16</u> Ship's Round of Beam = <u>11.75"</u> Difference <u>.59</u> Restricted to Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right) =$ <u>.59 \times 5133 / 4 = - .08</u>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poof enclosed ... ..	<u>32.92</u>	<u>32.92</u>	<u>7' 6"</u>	-	<u>32.92</u>
" overhang ... ..					
R.Q.D. enclosed ... ..					
" overhang ... ..					
Bridge enclosed ... ..	<u>98.00</u>	<u>98.00</u>	<u>7' 6"</u>	-	<u>98.00</u>
" overhang aft ... ..	<u>2.00</u>	<u>1.50</u>	<u>7' 6"</u>		<u>1.50</u>
" overhang forward ... ..					
Fore enclosed ... ..	<u>28.58</u>	<u>28.58</u>	<u>7' 6"</u>	-	<u>28.58</u>
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" forward ... ..					
" Total ... ..	<u>161.50</u>	<u>161.00</u>			<u>161.00</u>

Standard Height of Superstructure 6.807  
" " R.Q.D. -  
Deduction for complete superstructure 37.38  
Percentage covered  $\frac{S}{L} =$  48.82  
" "  $\frac{S_1}{L} =$  48.67  
" "  $\frac{E}{L} =$  48.67  
Percentage from Table, Line A. ✓  
(corrected for absence of forecastle (if required))  
Percentage from Table, Line B. 34.87  
(corrected for absence of forecastle (if required))  
Interpolation for bridge less than 2L (if required)  
Deduction = 37.38 \times 34.87 = - 13.03

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<u>43.07</u>	1		<u>43.07</u>	<u>54.</u>	<u>54.00</u>	1		<u>54.00</u>
1/4 L from A.P. ... ..	<u>19.165</u>	4		<u>76.66</u>	<u>22.12</u>	<u>22.12</u>	4		<u>88.48</u>
1/2 L " ... ..	<u>4.74</u>	2		<u>9.48</u>	<u>5.53</u>	<u>5.53</u>	2		<u>11.06</u>
Amidships ... ..	-	4		-	-	-	4		-
3/4 L from F.P. ... ..	<u>9.48</u>	2		<u>18.96</u>	<u>11.16</u>	<u>11.16</u>	2		<u>22.32</u>
3/4 L " ... ..	<u>38.33</u>	4		<u>153.32</u>	<u>44.63</u>	<u>44.63</u>	4		<u>178.52</u>
F.P. ... ..	<u>86.15</u>	1		<u>86.15</u>	<u>102.</u>	<u>102.00</u>	1		<u>102.00</u>
Total ... ..				<u>387.64</u>					<u>456.38</u>

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( .75 - \frac{S}{2L} \right) =$   $\frac{68.74}{18} \left( .75 - \frac{24.41}{50.59} \right) = - 1.93$   
If limited on account of midship superstructure. ✓  
If limited to maximum allowance of 1 1/2 ins. per 100 ft.

<b>Deduction for Tropical Freeboard.</b> <b>Addition for Winter and Winter North Atlantic Freeboard.</b> Ft. Depth to Freeboard Deck = 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) =	<b>Deduction for Fresh Water.</b> Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line T = Deduction = $\frac{\Delta}{40 T}$ inches =	<b>TABULAR FREEBOARD</b> corrected for Fresh Deck (if required) Correction for coefficient $\frac{761 + 68}{1.36} = \frac{1.441}{1.36}$ Depth Correction ... .. <u>8.88</u> Deduction for superstructures ... .. <u>13.03</u> Sheer correction ... .. <u>1.93</u> Round of Beam correction ... .. <u>0.08</u> Correction for Thickness of Deck amidships ... .. Other corrections, scantlings, etc. ... .. <u>8.88</u> <u>15.04</u> <u>- 6.16</u> Summer Freeboard = <u>48.09</u>
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:  
Existing freeboard as measured, being more favorable than those computed under the Convention regulations.  
Tropical Fresh Water Line above Centre of Disc ... .. 10 1/2"  
Fresh Water Line " " ... .. 6"  
Tropical Line " " ... .. 4 1/2"  
Winter Line below " " ... .. 4"  
Winter North Atlantic Line " " ... ..  
Tropical Fresh Water Freeboard ... .. 3' 11 3/4"  
Fresh Water " " ... .. 3' 5 3/4"  
Tropical " " ... .. 3' 7 1/4"  
Winter " " ... .. 4' 3 3/4"  
Winter North Atlantic " " ... ..  
RECEIVED 19/4/40  
RECEIVED 27 SEP 1938  
RECEIVED 2 MAR 1938



Aroona

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles :—

None.

Particulars of Companionways :—

None.

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

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *all swan neck type.*

Particulars of Gangway Cargo and Coaling Ports:—

None.

No. 5 suffers and is caused from enclosed surface divisions or from spaces below the first sand deck.  
and no scupper from bulge area led to the bulge  
No. 6 suffering discharges such fitted with one automatic east steel steam valve.

No. 7 suffering discharges from spaces below the first sand deck.

Back side:- 3 in foremast, 7 in poop. Port side only:- 4 in bridge.  
all 8" after masts, cast steel frames and fitted with hinged dead lights.  
No side scuttles below the foreward deck.

on four walls and roof:- 2 bar rails 3'-3" high.  
on bridge:- 8 efficient balusters 3'-3" high.

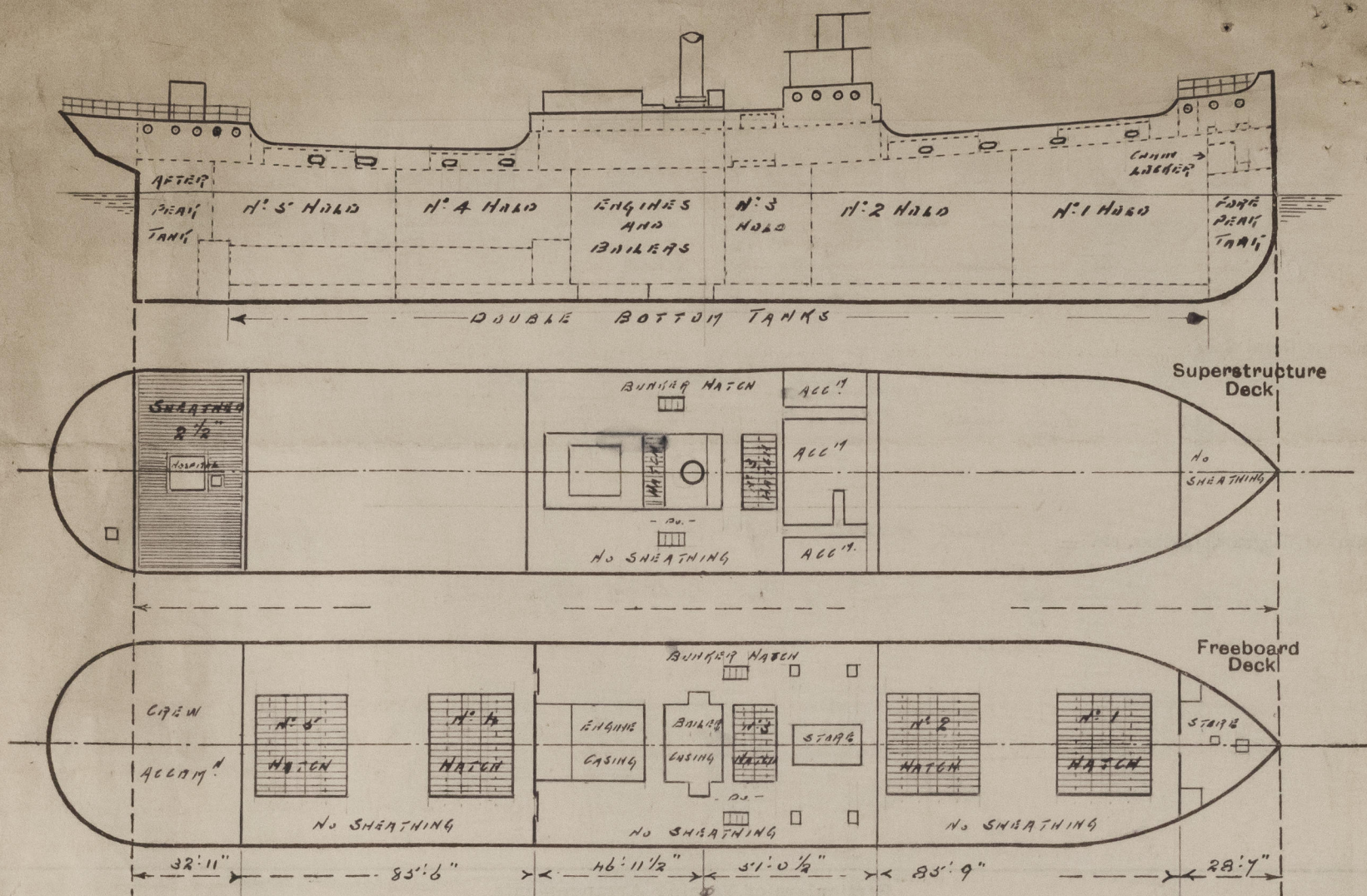
to off saint timper my lifelines fitted when required.

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 ... ..	.40"	.36"	6 x 3 1/2 x .38 L	28"	None	4'10" x 2'0"	19"	7'6"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ... ..	.26"	.26"	Flanged 3"	33"	None	4'11" x 2'1"		
Bridge, Forward Bulkhead ... ..	.42"	.42"	8 x 3 x .38 L	30"	BRACED TOP & BATTEN	3'5" x 3'11 1/2"	18 1/2"	7'6"
Forecastle Bulkhead ... ..	.26"	.26"	Flanged 3 1/2"	30"	None	4'10" x 3'5 1/2"	20 1/2"	7'6"
Trunk, Aft ... ..						4'1" x 3'3"	24"	7'6"
Trunk, Forward ... ..								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks ... ..	.28"	.28"	3 1/2 x 3 1/2 x .35 L	39"	BRACED TOP	3'0" x 2'0"	18"	7'3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ... ..	.42"	.38"	3 1/2 x 3 1/2 x .38 L	39"	BATTENED FROM DECK GRATES.	3'0" x 2'0"	17"	7'6"
Deckhouses on Flush Deck Ships ...								

Poop Bulkhead	... ..	Hinged steel doors.	Can be manipulated from both sides.
Raised Quarter Deck Bulkhead	... ..	Starboard Side, Storm bands in riveted channels full height of opening. Port Side, Hinged wood door. Can be manipulated from both sides. Originally fitted for storm bands, riveted channels still in place, opening fully closed by wood frame.	
Bridge, After Bulkhead	... ..	Hinged steel doors with screw fastenings. Can be manipulated from outside only.	
Bridge, Forward Bulkhead	... ..	Hinged wood door. Can be manipulated from both sides. Originally fitted for storm bands, riveted channels still in place. Opening fully closed by wood frame.	
Forecastle Bulkhead	... ..	Hinged steel doors to side doors. Manipulated from both sides.	
Exposed Machinery Casings on Fore- ward or Raised Quarter Decks	... ..	Hinged steel doors.	Can be manipulated from both sides.
Exposed Machinery Casings on Super- structure Decks	... ..	Hinged steel doors.	Can be manipulated from both sides.
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances	... ..	Hinged steel doors.	Can be manipulated from both sides.
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:—



Cargo vessel usually trading on the Australian Coast. Surveyed afloat and in dry dock in conjunction with port Special Survey 2<sup>nd</sup> N° 1.  
To complete the survey:— N° 1 and 6 double bottom tanks to be examined internally and the fore and after peak tanks to be tested.

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

Hatches on Foreward Deck:—

Within Forecastle:— To Fore Peak:— 2'9" x 2'8" 9" Bull Angle Beamings. 2 1/2" cover on 2 1/2" rests, cleats, battens and tarpaulins.

To Chain Locks:— 2'5" x 2'1" 3" angle iron beamings. 2 1/2" cover on 2 1/2" rests.

Within Bridge:—

To Holds, 2 each side:— 2'0" x 1'9" 9" Bull Angle Beamings. 3" hinged wood covers secured by screw fastenings.

Bunker Hatches, one each side:— 3'10" x 3'0" 9" Bull Angle Beamings. 2 1/2" wood covers on 3" rests, fitted with cleats, battens and tarpaulins.

Hatches on Superstructure Decks:—

on Bridge Deck:— Bunker Hatches, one each side:— 3'1" x 2'11 1/2". Beamings 30" x 4 1/2". 2 1/2" wood covers on 2 1/2" rests. Fitted with cleats, battens and two tarpaulins.

Bunker Hatch incorporated in machinery casing:— 18'0" x 3'6 1/2" beamings 3'0" x 4 1/2". 3" wood covers, 2 1/2" rests. Fitted with cleats, battens and two tarpaulins.

on Poop:— Tunnel Escape Hatch:— 2'9" x 2'4" beamings 16" x 3/8". Fitted with 3" hinged wood cover and screw fastenings.

To Transom Store Room:— 2'6" x 2'4" 9" Bull Angle Beamings. 3" wood cover on 2 1/2" rests, cleats, battens and tarpaulins.

Builder's name and yard number *Sw. Raylton Dixon and Co. Ltd.*

Yard N° 614

Names of sister ships *British Standard "C" class.*

Owners *The Adelaide Steamship Co. Ltd.*

Fee £ *12* : 0 : 0

Received by me



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