

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **24441**
(For London Office only.)

GREENOCK REPORT No. 19406

Computation of Freeboard for Steamer, Sailing Ship, Tanker
Having Raised quarter deck & Forecastle.Port of Survey Greenock

(Type of Superstructures.)

Date of Survey April 26th 1932

Ship's Name ARGANTOCK. Nationality and Port of Registry BRITISH GREENOCK Official Number 142271 Gross Tonnage 841 Date of Build 1919-6

Name of Surveyor Kenneth Inglis

Moulded Dimensions: Length 199.77 Breadth 30 Depth 15
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1570 tons
Coefficient of fineness for use with Tables .419

Particulars of Classification +100.A.I.

Depth for Freeboard (D)

Moulded depth ... 15.0
Stringer plate03
Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 15.03

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = (15.03 - 13.32) 1.536 = + 2.63
(b) Where D is less than Table depth (if allowed)
(Table depth - D) R =
If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 30.0
Standard Round of Beam = $\frac{B \times 12}{50} = \underline{7.2}$
Ship's Round of Beam = 7.50
Difference .3
Restricted to
Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{.3}{4} (1 - .6765) = \underline{-.02}$

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>110.54</u>	<u>110.54</u>	<u>4.0</u>		<u>110.54</u>
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...	<u>23.64</u>	<u>23.64</u>	<u>7.0</u>		<u>23.64</u>
" overhang ...	<u>1.83</u>	<u>.91</u>			<u>.91</u>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	<u>136.04</u>	<u>135.12</u>			<u>135.12</u>

Standard Height of Superstructure 6.0
" " R.Q.D. 3.64
Deduction for complete superstructure 25.98
Percentage covered $\frac{S}{L} = \underline{68.122}$
" " $\frac{S_1}{L} = \underline{64.652}$
" " $\frac{E}{L} = \underline{64.652}$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. 59.012
(corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = 25.98 x .5901 = - 15.33

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	<u>29.98</u>	1	<u>29.98</u>	<u>24.5</u>	<u>24.25</u>	1	<u>24.25</u>
$\frac{1}{2}$ L from A.P. ...	<u>13.345</u>	4	<u>53.38</u>	<u>10.5</u>	<u>10.56</u>	4	<u>42.24</u>
$\frac{2}{3}$ L " ...	<u>3.30</u>	2	<u>6.60</u>	<u>2.6</u>	<u>2.41</u>	2	<u>4.82</u>
Amidships ...	-	4	-	0	-	4	-
$\frac{2}{3}$ L from F.P. ...	<u>6.59</u>	2	<u>13.18</u>	<u>7.3</u>	<u>7.29</u>	2	<u>14.58</u>
$\frac{1}{2}$ L " ...	<u>26.68</u>	4	<u>106.72</u>	<u>29.23</u>	<u>29.23</u>	4	<u>116.92</u>
F.P. ...	<u>59.95</u>	1	<u>59.95</u>	<u>69.</u>	<u>69.00</u>	1	<u>69.00</u>
Total ...			<u>269.81</u>				<u>285.25</u>

Mean actual sheer aft = Deficient
Mean standard sheer aft = 79.90

Mean actual sheer forward = Excess
Mean standard sheer forward = 79.90

Length of enclosed superstructure forward of amidships = .0534
" " aft of " = .50

Actual Ht. R.Q.D. = 4.0
Stand. " " = 3.67
" " = .33
" " = .4

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{15.44}{18} \left(.75 - \frac{.3406}{2} \right) = \underline{-.35}$

If limited on account of midship superstructure. .767 x .35 = -.27 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 = 19.03
Summer freeboard = 4.89
Moulded draught (d) = 14.14

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 3.53 = 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 1570
 $\Delta = \frac{1570 - 1765}{1570} \times 1799$
Tons per inch immersion at summer load water line 11.96
T = 14.11
Deduction = $\frac{T}{40}$ inches = 3.73

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{.719 + .68}{1.36} \times 22.98 = \underline{23.06}$

	+	-
Depth Correction ...	<u>2.63</u>	
Deduction for superstructures ...		<u>15.33</u>
Sheer correction ...		<u>.24</u>
Round of Beam correction ...		<u>.02</u>
Correction for Thickness of Deck amidships ...		
Other corrections, scantlings, etc. ...	<u>48.00</u>	
	<u>50.63</u>	<u>15.62</u>
Summer Freeboard =	<u>58.83</u>	

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

Tropical Fresh Water Line above Centre of Disc ...	<u>7\frac{1}{2}</u>	Tropical Fresh Water Freeboard ...	<u>4.10</u>
Fresh Water Line " " ...	<u>3\frac{1}{2}</u>	Fresh Water " " ...	<u>4.32</u>
Tropical Line " " ...	<u>3\frac{1}{2}</u>	Tropical " " ...	<u>4.4</u>
Winter Line below " " ...	<u>3\frac{1}{2}</u>	Winter " " ...	<u>5.24</u>
Winter North Atlantic Line " " ...	<u>5\frac{1}{2}</u>	Winter North Atlantic " " ...	<u>5.24</u>

5 MAY 1932

RECEIVED

18 MAY 1932

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		No. 1 UPPER Dk	No. 2 RAISED QUARTER Dk	BUNKER HATCH ON CASING TOP.					
Dimensions of Hatchway		55' x 18'	26'6" x 18'	7' x 16'					
COAMINGS	Height above Deck	36"	36"	22" ABOVE CASING TOP.					
	Thickness	5"	44"	40"					
	Stiffeners	6" B.A.	6" B.A.	NONE					
	Brackets, Stays	7 1/2" BULB PLATE	7 1/2" BULB PLATE	NONE					
HATCH BEAMS	Number	10	4	No					
	Spacing	5'0"	5'4"	HATCH					
	Scantling and Sketch	PLATE 17 x 36 JL ANGLES 4 x 3 x 4 FITTED WITH RIDER PLATE ON TOP.	16 x 36 JL 4 x 3 x 4 ANGLES FITTED WITH RIDER PLATE	BEAMS					
	Bearing Surface	3"	3"						
FORE AND AFTERS	Number	No	No	No					
	Spacing	FORE	FORE	FORE					
	Unsupported Lengths	4	4	4					
	Scantling and Sketch	AFTERS	AFTERS	AFTERS					
	Bearing Surface								
HATCH COVERS	Material	WHITE PINE	WHITE PINE	WHITE PINE					
	Thickness	2 1/2"	2 1/2"	2 1/2"					
	How fitted	FORE & AFT	FORE & AFT	FORE & AFT					
	Bearing Surface	3"	3"	3"					
Spacing of Cleats		24"	24"	24"					
Number of Taraulins		ONE	ONE	YES 2					

*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? ☒ NO SEE RECOMMENDATIONS *See.*
 Are lashings provided in accordance with rule requirements? ☒ YES.

Particulars of fiddle, funnel and ventilator coamings:— Strokehold gratings covered by strong hinged covers, fiddle & funnel ventilators in efficient condition, Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:—

None.

Particulars of Companionways:—

None.

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

1 vent on forecastle deck 12" dia, coaming 36" x 34" led to fore peak store.
 1 vent on forecastle deck 16" dia, coaming 38" x 36" " " hold.
 1 vent on raised quarter deck 16" dia coaming 36" x 36" " " hold.
 All ventilators constructed in accordance with the rules & coamings closed with wood plugs & canvas covers.

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

1 W.I. air pipe on fore 5' high x 3 1/2" dia to fore peak (under sparking plate).
 3 W.I. air pipes on freeboard deck 11' high x 3 1/2" dia to double bottom.
 1 W.I. air pipe on raised Q. deck 33" x 3" dia to " "
 1 W.I. " " " " 8" x 30" x 3" " "
 1 W.I. " " " " 16" x 3 1/2" " " after peak tank & sampling hole.
 Air pipes have no rifting holes or canvas covers. *wood plugs provided*

Particulars of Gangway Cargo and Coaling Ports:—

None

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Particulars of Suppers and Sanitary Discharge Pipes — Shinger bar cut for suppers on upper & raised quarter decks.
 Sanitary discharges fitted with C.S. storm valves at ship's side & efficient traps at inner end.

Particulars of Side Scuttles:—

all side scuttles below forecastle deck fitted with hinged deadlights.
 all scuttles of substantial construction.

Particulars of Guard Rails:— Guard rails on forecastle deck 3'3" high with 2 rods & stanchions spaced 4'0" apart. Steel bulwark round freeboard deck 3'6" high supported by 7 1/2" Bulb plate stays spaced 5'6" apart. Steel bulwark 3'3" high round sides & after end, supported by 7 1/2" bulb plate stays spaced 5'6" apart. Guard rails at fore end of raised quarter deck 3'3" high with 2 rods & stanchions 4'0" apart.

Particulars of Gangways, Lifelines, etc.:—

No satisfactory gangway, lifelines fitted. *provided 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	111	3'3"	33" x 15" 30" x 18"	2 2 1/2	6.875/14	22.2
Forward Well	64'6"	3'6"	32 1/2" x 14 1/2" * 33" x 15"	3	13.6	12.95

State position of each freeing port ... After Well:— 18'0" x 40" from F. End of R.Q.D. } 9" above deck edge.
 (F. and A. position and height above deck edge) } Forward Well:— 4'0", 17'6", 34" & 50" from aft bulkhead.
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *port marked * fitted with hinged shutter.*
all others fitted with balanced hinged shutters.

Additional area where sheer is less than standard.

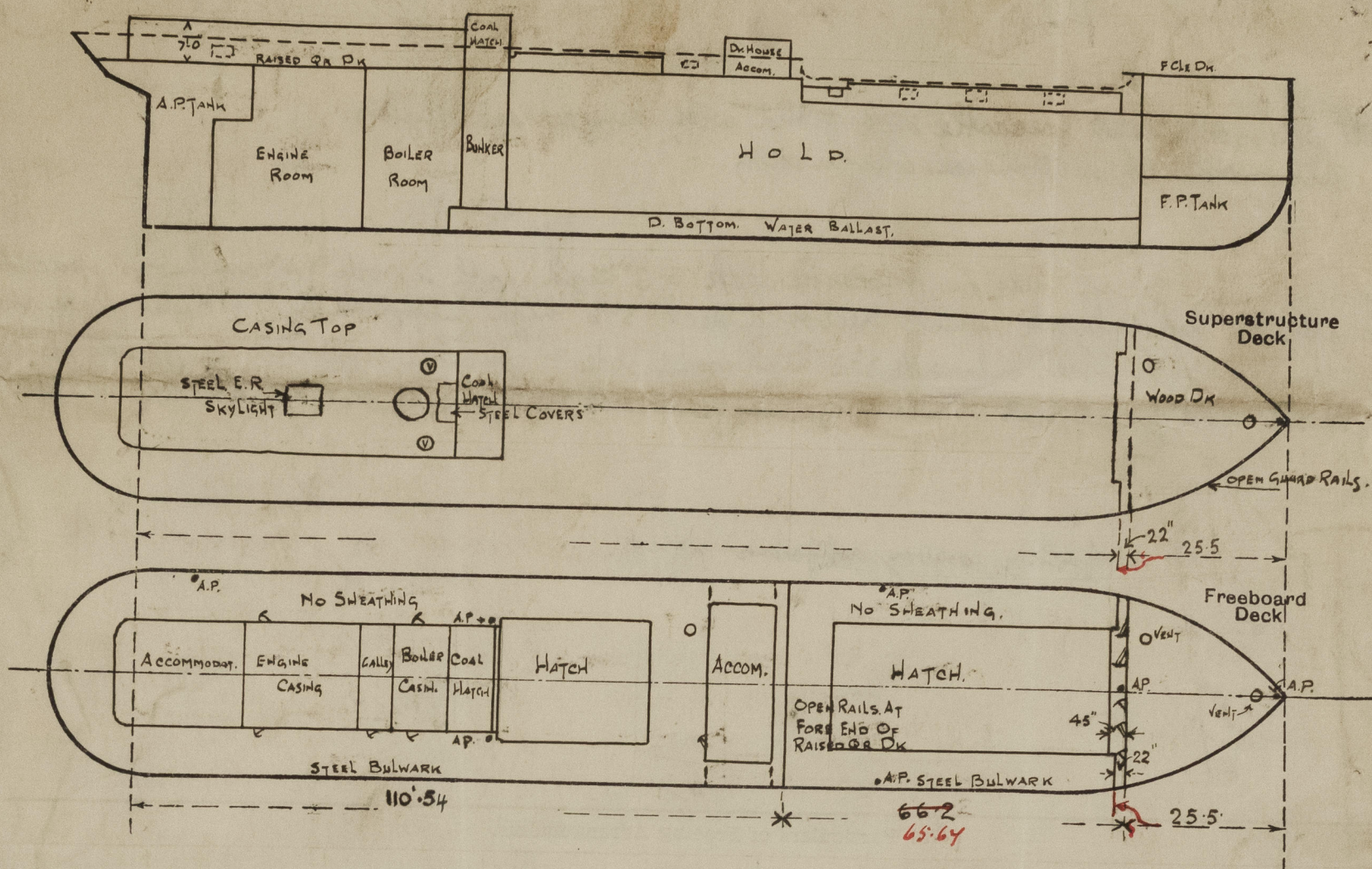
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓							
Raised Quarter Deck Bulkhead	✓	30"	5 x 3 x 30 ANG & 3 DIPHRAGM.	30"	BRACKETS	NONE	✓	4'0"
Bridge, After Bulkhead	✓							
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓	35"	30"	3 x 3 x 30 STEEL BULKHEADS.		4'6" x 2'3"	18"	7'0"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	35"	30"	3 1/2 x 3 x 30	33"	Back at top. none at bottom	4'6" x 2'3"	21"
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	✓	no openings
Bridge, After Bulkhead	✓	
Bridge, Forward Bulkhead	✓	
Forecastle Bulkhead	✓	steel & wood doors operated from both sides.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	steel doors operated from both sides.
Exposed Machinery Casings on Superstructure Decks	✓	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	
Deckhouses on Flush Deck Ships	✓	wood door at aft end.

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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 is at present on Port Glasgow slipway & is being scanned & repaired for damage & Special Survey No 3. The following recommendations have been made to comply with the regulations:—
 Air pipes in hull to be raised to 36" & on raised quarter deck to 30".
 Gangway, lifelines or other satisfactory means to be provided for the protection of the crew in getting to & from their quarters.
 Green tarpaulin to be supplied for hatch on freeboard deck & on raised quarter deck
 Freeing port areas on raised quarter deck to be increased to 14.1 square feet area on each side

O M I T

Builder's name and yard number. Ardrossan D.D & S.B Co's No 305

Names of sister ships ☒

Owners P McCallum & Sons Ltd

Fee £ 6 : 16 : 0

Received by me.



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