

Rpt. C.11.

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20 MAY 1932

Index. No. 306
(For London Office only.)Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

No. 100414

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Shelter deck with tonnage opening aft.

Port of Survey Liverpool

Date of Survey May 1932.

Name of Surveyor R. R. Rutwen

Particulars of Classification 100 A.1.

Shelter deck with freeboard

ULSTER COAST

(Type of Superstructures.)

Ship's Name

Nationality and Port of Registry

British 146318

Gross Tonnage 774

Date of Build 1922-11

SCOTTISH COAST

Liverpool

Moulded Dimensions: Length 199.9 Breadth 31.0 Depth 22.4 to shelter deck
Moulded displacement at moulded draught = 85 per cent. of moulded depth 1672 tons
Coefficient of fineness for use with Tables 747

Depth for Freeboard (D)

Moulded depth ... 14.10
Stringer plate ... 34.03
Sheathing on exposed deck 2 1/2" aft over accommodation.
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 14.86

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R =
(14.86 - 13.32) 1.537 = + 2.37"
(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) 31.0
Standard Round of Beam = $\frac{B \times 12}{50} = 7.44$
Ship's Round of Beam = 6
Difference 1.44
Restricted to
Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{1.44}{4} \times 0.01 = \text{nil.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	69.58	69.58	7.6	-	69.58
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...					
" overhang aft ...					
" overhang forward ...					
File enclosed ...	126.32	126.32	7.6	-	126.32
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	4.0	2.00	7.6	-	2.00
" forward ...					
Total ...	199.41	197.90			197.90

Standard Height of Superstructure 6.0

R.Q.D.

Deduction for complete superstructure 25.99

Percentage covered $\frac{S}{L} = 100\%$ $\frac{S_1}{L} = 99\%$ $\frac{E}{L} = 99\%$

Percentage from Table, Line A. 98.77%

Percentage from Table, Line B.
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = $25.99 \times 98.77 = - 25.67$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	29.99	1		29.99	26.0	27.50	1		27.50
1/4 L from A.P. ...	13.34	4		53.36	9.0	20.25	4		81.00
3/4 L " ...	3.30	2		6.60	1.5	5.00	2		10.00
Amidships ...		4					4		
3/4 L from F.P. ...	6.60	2		13.20	5.9	7.92	2		15.84
1/4 L " ...	26.69	4		106.76	23.9	32.04	4		128.16
F.P. ...	59.98	1		59.98	54.0	54.00	1		54.00
Total ...				269.89					352.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{82.61}{18} (.75 - .50) = - 1.15$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.Ft.
Depth to Freeboard Deck = 14.86
Summer freeboard = 1.17
Moulded draught (d) = 14.69Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $3.67 = 3 \frac{3}{4}$ "
Addition for Winter North Atlantic Freeboard (if required) = 2"

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 1974$

Tons per inch immersion at summer load water line

T = 12

Deduction = $\frac{\Delta}{40 T}$ inches = $4.11 = 4$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 2.37
Deduction for superstructures ... 25.67
Sheer correction ... 1.15
Round of Beam correction ...
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

Summer Freeboard = 23.08

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

Tropical Fresh Water Line above Centre of Disc ... 4"
Fresh Water Line " " ... 4"
Tropical Line " " ... 3 3/4"
Winter Line below " " ... 5 3/4"
Winter North Atlantic Line " " ...Tropical Fresh Water Freeboard ... 0'-2"
Fresh Water " " ... 0'-2"
Tropical " " ...
Winter " " ...
Winter North Atlantic " " ...

5m. 3.32

25 MAY 1932

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Particulars of Scuppers and Sanitary Discharge Pipes :-

Sanitary discharges are fitted with storm valves.
Scuppers on freeboard deck list 1/2 ft. from ship side about 15" below beltline.
also scupper openings on deck closed by bolted plate.
No overboard scupper in shelter deck except in trimage well
where 5" screw down non return valve controlled from the shelter deck is fitted P15

Particulars of Side Scuttles :-

Side Scuttles to Officers & Crews a accommodation below shelter deck aft
have no type of deadlights.

Particulars of Guard Rails :-

7 ft 6 bulwark on shelter deck 3-3 high efficiently supported.
Portable stanchions & chains around nos 1 & 2 Hatches on freeboard deck.

Particulars of Gangways, Lifelines, etc. :-

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 <i>all fore & aft in shelter deck</i>	<i>199-9</i> <i>203</i>	<i>3-3</i>	<i>30x18</i>	<i>36</i>	<i>22.5</i>	<i>19.99</i> <i>4075</i>
Forward Well						

State position of each freeing port ... After Well :—
and A. position and height above deck edge) 7 1/2 Forward Well :—
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.

Two steel shutters 2 P15 with 2 rails
1 " " 1 rail

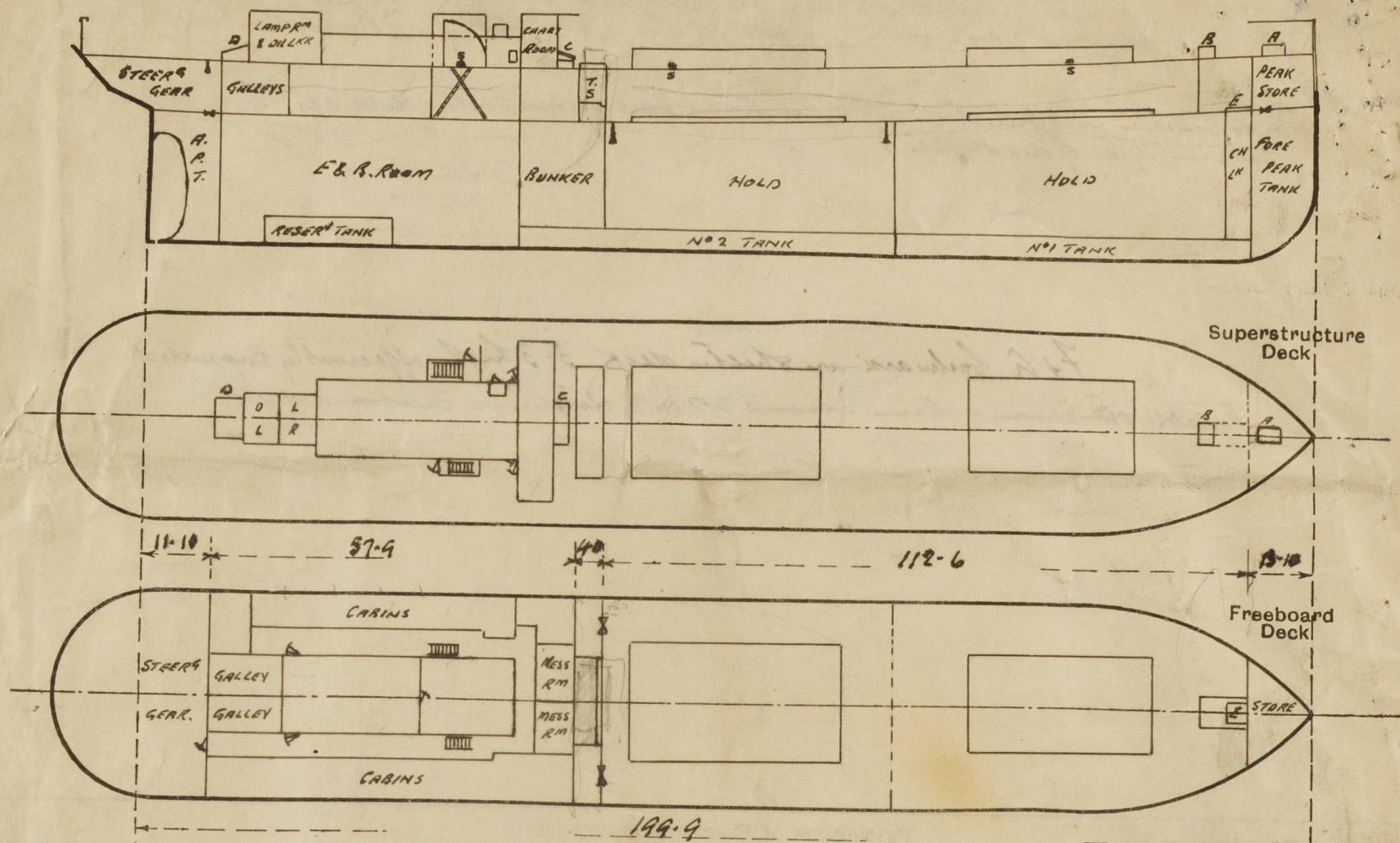
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Deck Bulkhead <i>at fore and steering gear compartment</i>	<i>vertical plating</i> <i>.26</i>	<i>.26</i>	<i>3 1/2 flanges</i>	<i>32</i>	<i>✓</i>	<i>60x24</i>	<i>6</i>	<i>7-6</i>
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead		<i>.36</i>	<i>4x3x35</i>	<i>36</i>	<i>unavailable</i>	<i>60x24</i>	<i>6</i>	<i>7-6</i>
Bridge, Forward Bulkhead	<i>.36</i>	<i>.36</i>	<i>4x3x40</i> <i>unavailable</i>	<i>33</i>	<i>unavailable</i>	<i>✓</i>	<i>✓</i>	<i>7-6</i>
Forecastle Bulkhead	<i>.36</i>	<i>.36</i>	<i>4x3x42</i>	<i>36</i>	<i>Knee at top + 2 P15 with knee T+B.</i>	<i>7-0 x 3-0</i>	<i>3</i>	<i>7-6</i>
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks								
Exposed Machinery Casings on Superstructure Decks	<i>.32</i>	<i>.25</i>	<i>5 flanges</i>	<i>28</i>	<i>Bracket to casing top</i>	<i>1 P15 53x18</i> <i>1 R15 29x19</i>	<i>10</i>	<i>6-9</i> <i>51</i>
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	<i>.36</i>	<i>.32</i>	<i>with</i>	<i>28</i>	<i>✓</i>	<i>1 P15 62x24 E.C.</i> <i>1 forward 62x16 To Aft</i>	<i>13 1/2</i> <i>6</i>	<i>7-4</i>
Deckhouses on Flush Deck Ships	<i>vertical plating</i> <i>.32</i>	<i>.32</i>	<i>3 1/2 x 3 x 36</i>	<i>26</i>	<i>✓</i>	<i>1 P15 68x24</i>	<i>12</i>	<i>7-9</i>

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

Deck Bulkhead <i>at fore and steering gear compartment</i>	<i>1 steel door, hinged operated from both sides</i>
Raised Quarter Deck Bulkhead	<i>No openings</i>
Bridge, After Bulkhead	<i>✓</i>
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	<i>1 P15 opening fitted with channels & 2 1/2 w.w. boards.</i> <i>1 P15 steel door hinged operated from both sides</i> <i>1 P15 " " (ash door) clip on outside</i>
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	<i>1 P15 double hinged steel door operated from both sides E.R.</i> <i>1 steel hinged door fore end of engine room 20 boiler tops operated from both sides</i>
Deckhouses on Flush Deck Ships	<i>1 P15 wood door operated from both sides</i>

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:—



Small Latches &c
on
Shell Pl. Deck.

A. Hatch to Fore Peak Store 20x20
Lamming 2-0x20
Covers 2 1/2 w.w.
Bearing 3"
Cleats 12" apart
2 Tarpsaulins ✓

B. Hatch to Chain locker 17x26
Lamming 2-0x30
Covers 2 1/2 w.w.
Bearing 3"
Cleats 12" apart
2 Tarpsaulins ✓

C. Skylight to Mess room 50x17
Lamming 13x30
Wood skylight securely fixed
to steel lamming ✓

D. Steel skylight to
galley 3-9x8-0
Lamming 13x30
Steel plates bracing
lights ✓

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

upper deck

E. Hatch to chain locker 26x26
Lamming 3x3x20
Wood covers 2 1/2 w.w.
Bearing 3" ✓

Mantle to Fore & aft peak
Tanks with steel bolted &
painted cover. ✓

Freeing port P&S in Tonnage well
18x18, sill 12" hinged steel & water
strong back with toggle & bolt ✓

Builder's name and yard number A. & J. Inglis Ltd 20657

Names of sister ship Ayrshire Coast

Owners Coast Lines Ltd.

Fee £ 6 : 16 : 0

Received by me



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