

B.T. COPY WRITTEN.

Newcastle-on-Tyne

No. 89004

13 AUG 1932

32315

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

W145

Computation of Freeboard for Steamer, ~~Sailing Ship, Tanker~~
having *Shelter Deck with Tonnage Opening.*Port of Survey *Newcastle-on-Tyne.*Date of Survey *11th + 12th August 1932*(Type of Superstructures.) *5456 in RB*

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
ANGLO-AUSTRALIAN.	British. London.	149817	<i>5456</i> 5467	<i>1927</i> 1928 <i>5 mo</i>

Name of Surveyor *C. Stephenson*

Moulded Dimensions: Length *425.5'* Breadth *57.66'* Depth *28.6"*
Moulded displacement at moulded draught = 85 per cent. of moulded depth *13202* tons
Coefficient of fineness for use with Tables *.777*

Particulars of Classification *100A1*
Shelter Deck with Freeboard.
S.S. Shc No. 1-31

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	28.50	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	57.66'
Stringer plate	.04	(28.54 - 28.37) 500 = + .51"		Standard Round of Beam = $\frac{B \times 12}{50}$	13.84
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	14.1/2"
Depth for Freeboard (D) =	28.54	If restricted by superstructures		Difference	.66
				Restricted to	
				Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{.66}{4} \times .006 = .011$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	35'-1"	35.08	8'-0"		35.08
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed			12'-0" at F.P.		
" overhang aft	385'-3"	385.25	8'-0" at		385.25
" overhang forward			9'-1/2" at		
F'cle enclosed			Tonnage P'le.		
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	5'-2"	2.58	9'-1/2"		2.58
" forward					
Total	425.50	422.91			422.91

Standard Height of Superstructure *7.50*
" " R.Q.D.Deduction for complete superstructure *42.00*Percentage covered $\frac{S}{L} = 100.00\%$ " " $\frac{S_1}{L} = 99.40\%$ " " $\frac{E}{L} = 99.40\%$ Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) *99.26%*Percentage from Table, Line B.
(corrected for absence of forecastle (if required))

Interpolation for bridge less than .2L (if required)

Deduction = *- 41.69"*

SHEER CORRECTION.

actual T.D. Height = 8'-0"
Standard T.D. = 7'-6"
Difference 6"

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	52.55	1		52.55	60.00	66.00	1		66.00
1/2 L from A.P.	23.38	4		93.52	26.70	29.38	4		117.52
1/2 L " "	5.78	2		11.56	6.60	7.26	2		14.52
Amidships		4					4		
3/4 L from F.P.	11.56	2		23.12	13.26	13.86	2		27.72
1/2 L " "	46.77	4		187.08	53.41	56.10	4		224.40
F.P.	105.10	1		105.10	120.00	126.00	1		126.00
Total				472.93					576.16

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{103.23}{18} (.75 - .50) = -1.43$

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.

Depth to Freeboard Deck = *28.54* Ft.
Summer freeboard = *3.55*
Moulded draught (d) = *24.99*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *6 1/4"*

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 13740$

Tons per inch immersion at summer load water line

 $T = 49.83$ Deduction = $\frac{\Delta}{40T}$ inches= *6.89 = 7"**not available*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.68 + .777}{1.36} = \frac{1.457}{1.36}$

	+	-
Depth Correction	51	-
Deduction for superstructures	-	41.69
Sheer correction	-	1.43
Round of Beam correction	-	-
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	.51	43.12

Summer Freeboard = *42.57*SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	13 1/4"
Fresh Water Line	7"
Tropical Line	6 1/4"
Winter Line below	6 1/4"
Winter North Atlantic Line	

Tropical Fresh Water Freeboard	2'-5 1/4"
Fresh Water	2'-11 1/2"
Tropical	3'-0 1/4"
Winter	4'-0 1/4"
Winter North Atlantic	

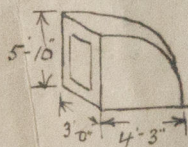
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Foundation

Tunnel and Ventilators in good condition.
E. R. skylight of steel and of strong construction.
Stokehold grating brass steel hinged covers. ~~Ind steel~~ cover
~~requires repair.~~

none.

Two companions on superstructure deck to crew's quarters aft. in strong steel house. Openings 4'-2" x 2'-1 1/2" : 15" ill. Solid wood door 1 1/2" thick operated from both sides.



Ventilators in exposed positions on freeboard and superstructure decks:—

On superstructure deck.	1 @ 6" dia.	32" high	30 to F. Peak.
	1 @ 16" "	36" "	38 to Hold.
	2 @ 16" "	36" "	38 " "
	8 @ 16" "	31 1/2" "	38 to Hold.
	1 @ 8 1/2" "	35" "	36 to Turntbl.
	4 @ 8 1/2" "	21" "	34 to crew.
	2 @ 6" "	21" "	32 to crew.

Vents have wood plugs & canvas covers.

On superstructure deck

1 @ 4' : 18"	to north to g. Peak.
1 @ 4 1/2' : 18"	to C.O.B.
2 @ 5' : 16 1/2"	" " " "
2 @ 5 1/2' : 18"	" " " "
2 @ 4 1/2' : 16"	" " " "
2 @ 5' : 16"	" aft. " peak.
2 @ 3 1/2' : 18"	" aft. " peak.

wood plugs provided for
all air pipes

none.

Particulars of Scuppers and Sanitary Discharge Pipes:—

All sanitary discharges led overboard above futboard deck with storm valves at shell.
Inn pipe scuppers R.S. from futboard deck overboard below futboard deck with storm valves at shell.
One pipe scupper from crew's wash houses aft led overboard below futboard deck with storm valves at shell.

Particulars of Side Scuttles:—

Sidelights to crew's accommodation aft fitted with hinged sidelights.

Particulars of Guard Rails:—

On Superstructure deck: Rails 3'-7" high: 3 rods: stanchions 4'-6" to 5'-6" apart.

Particulars of Gangways, Lifelines, etc.:—

None.

Crew's quarters aft.

Particulars of Freeing Arrangements.

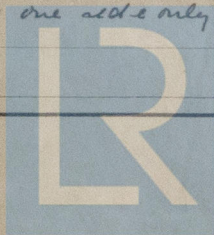
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	5'14"	9'-11 1/2"	2'-0" x 2'-0"	1	4 sq	✓
Forward Well	✓					
State position of each freeing port } After Well:— (F. and A. position and height above deck edge) } Forward Well:— State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Additional area where sheer is less than standard.						

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 <i>Longage Bld.</i>	✓	34	6 x 3 x 34	33"	✓	✓	✓	9'-4 1/2"
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead								
Bridge, Forward Bulkhead <i>Longage Bld.</i>								
Forecastle Bulkhead <i>Longage Bld.</i>	✓	34	6 x 3 x 34	29" to 33"		2 @ 4'-6" x 3'-1"	18"	9'-4 1/2"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks	36	32	3 1/2 x 3 x 36	B.R. 31" E.R. 20 to 33"	B.R. 31" E.R. 20 to 33"	5 @ 4'-5" x 23"	18"	7'-10"
Machinery Casings within Superstruc-tures not fitted with Class I Closing Appliances	44	32	3 1/2 x 3 x 36	B.R. 31" E.R. 20 to 33"	✓	2 @ 4'-5" x 23" 1 @ 4'-6" x 4'-3" 1 @ 1'-6" x 1'-6"	18" 21" 27"	8'-0" to 8'-2"
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead	no openings.
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead <i>Longage Bld.</i>	2 1/2" weather boards in mid channels full height of openings.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Super-structure Decks	Ordinary steel hinged doors operated from both sides.
Machinery Casings within Superstruc-tures not fitted with Class I Closing Appliances	20. Ordinary steel hinged doors operated from both sides. 20. Dry Bulk Room hinged steel door secured by clips operated one side only and hinged sliding door for coal trimming.
Deckhouses on Flush Deck Ships ...	

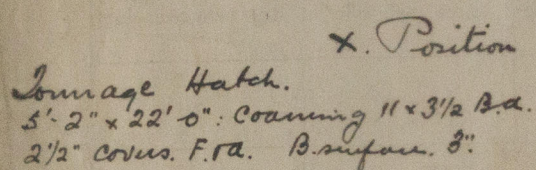


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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



2 Skylights to crew quarters.
4'-0" x 2'-6", 10" to 14" high
34 steel Coaming: 1 1/2 solid wood lps.
decks 24" : 1 Thompson.

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

Hatch on Casing Top.

Coal Shoot.

Coal Shovel.
7'-3" x 19'-0": Coaming 15" x 44.

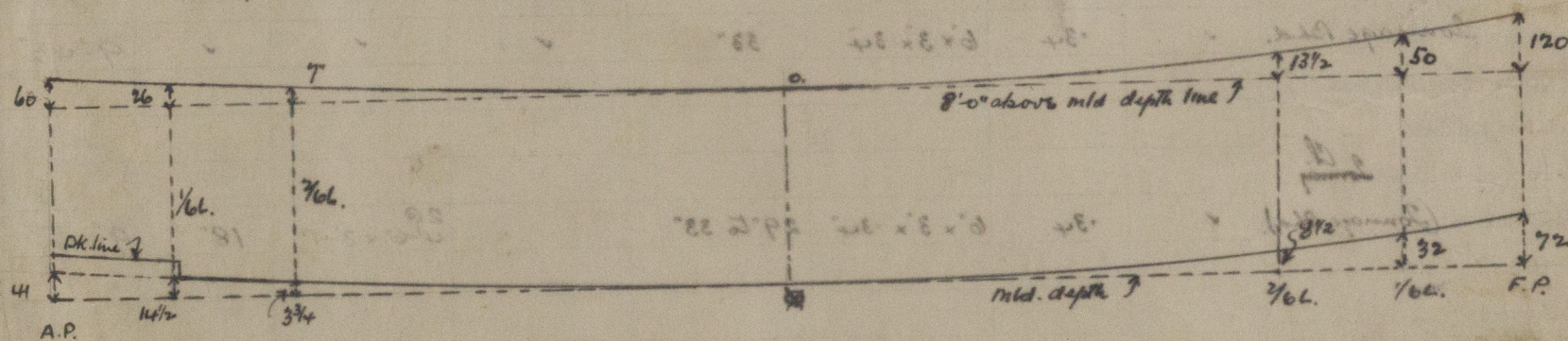
1 Beam, 10" x 4" Buck. plate with double
3/2 x 3/2 x 4" at Top: Beam surface, 3" x 7".

3 1/2 x 3 1/2 x .44 at top. Seaming 1/2"
Covus. Fra. 2 1/2": cleats 23. 2 Turpaulins.

Wash ports in Luggage space.
24" x 24": 12" above deck.
6" from Ford. Blvd. Fitted with
hinged steel plate shutter.

Ship measured afloat.

Sheer line of Freeboard deck broken at after Lownage Bld + deck heights
vary as shown on diagram.



Builder's name and yard number:

Short Bros. Ltd. Sunderland.

Names of sister ships

Owners.

Nitrate Producers. Steamships Co.

Fee £

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Received by me.