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14 APR 1932

Rpt. C.II.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.Index. No. **29387**
(For London Office only.)West Hartlepool
Report 17/135

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Poop & Bridge & Forecastle Combined.

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
"CITY OF GLASGOW"	British Liverpool	143700	5321	1920, 12m.

Moulded Dimensions: Length 390.75 Breadth 53.98 Depth 31.42
Moulded displacement at moulded draught = 85 per cent. of moulded depth 12626 tons
Coefficient of fineness for use with Tables $\frac{390.75 \times 53.98 \times 85 \times 31.42}{12626} = .784$

Port of Survey West Hartlepool
Date of Survey 6th April 1932
Name of Surveyor C. Millar
Particulars of Classification 100A1

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... 31.42	(a) Where D is greater than Table depth (D - Table depth) R = $(31.42 - 26.95) 3 = +16.23$	Moulded Breadth (B) <u>53.98</u> Standard Round of Beam = $\frac{B \times 12}{50} = 12.96$ Ship's Round of Beam = <u>13.2</u> Difference <u>Excess</u> = <u>.54</u>
Stringer plate ... 04	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Restricted to Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L}) = \frac{.54}{4} (1 - .975) = -.01$
Sheathing on exposed deck ✓ $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	
Depth for Freeboard (D) = <u>31.46</u>		

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	84.25	84.25	8.17	✓	84.25	Standard Height of Superstructure <u>7.41</u> ✓
" overhang ...						" " R.Q.D. ✓
R.Q.D. enclosed ...						Deduction for complete superstructure <u>41.38</u> ✓
" overhang ...						Percentage covered $\frac{S}{L} = 91.75\%$ ✓
Bridge enclosed ...	274.25	274.25	8.17	✓	274.25	" " $\frac{S_1}{L} = 91.75\%$ ✓
" overhang aft ...						" " $\frac{E}{L} = 91.75\%$ ✓
" overhang forward ...						Percentage from Table, Line A. ✓
F'cle enclosed ...						(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B.
Trunk aft ...						(corrected for absence of forecastle (if required)) <u>89.85%</u>
" forward ...						Interpolation for bridge less than 2L (if required)
Tonnage opening aft ...						Deduction = $41.38 \times .8985 = -37.19$ ✓
" " forward						
Total ...	358.50	358.50			358.50	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft = excess ✓	Mean standard sheer aft
A.P. ...	49.07	1		49.07	57.00	57.00	1		57.00	✓	✓
1/4 L from A.P. ...	21.84	4		87.36	24.88	24.88	4		99.52	✓	✓
1/2 L " ...	5.40	2		10.80	5.50	5.50	2		11.00	✓	✓
Amidships ...		4					4				
3/4 L from F.P. ...	10.80	2		21.60	10.75	10.75	2		21.50	✓	✓
3/4 L " ...	43.68	4		174.72	45.75	45.75	4		183.00	✓	✓
F.P. ...	98.15	1		98.15	108.00	108.00	1		108.00	✓	✓
Total ...				441.70					478.52	✓	✓

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.82}{18} (.75 - .4585) = .596$

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 = 31.46 ✓
Summer freeboard = 4.35 ✓
Moulded draught (d) = 27.11 ✓Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.78 $\frac{63}{4}$ ✓
Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 12895$ tons
Tons per inch immersion at summer load water line
 $T = 44.37$ ✓Deduction = $\frac{\Delta}{40T}$ inches
= .729 ✓

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 16.23 ✓
Deduction for superstructures ... 37.19 ✓
Sheer correction ... 0.76 ✓
Round of Beam correction01 ✓
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...Summer Freeboard = 52.65 ✓

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

Tropical Fresh Water Line above Centre of Disc ... 14 ✓
Fresh Water Line " " ... 4 1/4 ✓
Tropical Line " " ... 6 3/4 ✓
Winter Line below " " ... 6 3/4 ✓
Winter North Atlantic Line " " ... ✓Tropical Fresh Water Freeboard ... 3 $\frac{24}{4}$ ✓
Fresh Water " " ... 3 $\frac{9}{4}$ ✓
Tropical " " ... 3 $\frac{9}{4}$ ✓
Winter " " ... 4 $\frac{11}{4}$ ✓
Winter North Atlantic " " ... ✓

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
FREEBOARD DECK										
Description of Hatchway	No 1	No 2	No 3	No 4	No 5	No 6	No 1	No 2	No 3	No 4
Dimensions of Hatchway	24-9 x 16	32-6 x 16	20 x 16	12-6 x 16	27-6 x 16	25 x 16	24-9 x 16	30 x 16	17-6 x 16	9-6 x 16
COAMINGS	Height above Deck	19"	19"	19"	27"	32"	31 1/2"	31 1/2"	31 1/2"	31 1/2"
	Thickness	50"	50"	50"	60"	50"	54"	54"	54"	54"
	Stiffeners	44"	44"	44"	44"	44"	44"	44"	44"	44"
	Brackets, Stays	2 1/2 dia	2 1/2 dia	2 1/2 dia	2 1/2 dia	2 1/2 dia	2 1/2 dia	2 1/2 dia	2 1/2 dia	2 1/2 dia
HATCH BEAMS	Number	4	6	4	2	4	4	5	3	4
	Spacing	4-11"	4-7"	4-7"	4-2"	4-7"	4-11"	5-0"	4-5"	4-6"
	Scantling and Sketch	14 x 34	14 x 34	14 x 34	12 x 32	13 x 33	14 x 34	14 x 34	11 x 30	11 x 30
	Bearing Surface	3	3	3	3	3	3	3	3	3
FORE AND AFTERS	Number	1	1	1	1	1	1	1	1	1
	Spacing	4-6"	4-6"	4-6"	4-6"	4-6"	4-6"	4-6"	4-6"	4-6"
	Unsuported Lengths	5-6"	5-6"	5-6"	5-6"	5-6"	5-6"	5-6"	5-6"	5-6"
	Scantling and Sketch	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3	10-0 x 4-3
HATCH COVERS	Material	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
	Thickness	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"
	How fitted	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.
	Bearing Surface	3	3	3	3	3	3	3	3	3
Spacing of Cleats	36"	36"	36"	36"	36"	36"	36"	36"	36"	36"
Number of Tarpaulins	2	2	2	2	2	2	2	2	2	2

Particulars of fiddle, funnel and ventilator coamings:-

Fiddle openings:- closed with hinged steel covers.
 Engine Room skylight is of steel with hinged steel flaps + glass bulls eyes.

Particulars of Flush Bunker Scuttles:-

There are no flush scuttles.

Particulars of Companionways:-

1 steel Companionway, at fore mast + 1 at main mast, to Gun Room, on Poop + Bridge Decks
 3' x 2' door which is of steel + hinged + can be manipulated from both side
 Coaming 15 1/2" high
 1 steel Companionway at aft end of Poop, with hinged steel door, 4-6 x 2 Coaming 18" high.

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

Upper Deck, after well. 1 each side 27" dia x 3/8" thick x 10' high Laid to Poop Front.
 Poop " 1 " 6" x 1/4" x 3' " Bridge + Poop 1 each side 30" dia x 3/8" x 36" high.
 Bridge + Forecastle decks 2 " 22" x 3/8" x 3' " 12" x 3/8" x 36"
 3 " 14" x 3/8" x 3' " 6" x 3/8" x 36"
 1 " 27" x 3/8" x 3' " " Deck to Bunker space 5' x 3' x 19" high C.I.
 1 " 24" x 3/8" x 3' " The ventilators have wooden plugs + canvas covers.

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

8 Cast Iron Airpipes, on Bridge Deck, on each side 14" high, closed with canvas covers
 3 " " " Poop " " " 14" " flashings

Particulars of Gangway Cargo and Coaling Ports:-

In Bridge Tower Decks
 2 Coaling Ports each side, hinged + secured with 2 buckle bars. The openings are 5-6 x 3-0 The doors
 are 3/4" thick + stiffened on edges with 7 x 5 x 1/2 steel angles
 1 Ash Port each side hinged + secured with 1 buckle bar. The opening is 1-6 x 1-2 The doors
 are made watertight with packing between the ledge + the

Particulars of Scuppers and Sanitary Discharge Pipes:-

3 Scuppers in well, each side, through shestrake at deck level.
 each side in File + Bridge space, blanked off + cemented over.
 3 sanitary discharges each side carried thro ship's side 2 feet above upper Deck, with brass storm valves.

Particulars of Side Scuttles:-

12 @ 9" dia, each side, 18" below Superstructure decks, in brass frames + hinged deadlights
 3 @ 8" Port Side, in Engine Room 18" below Upper Deck, in brass frames + hinged deadlights

Particulars of Guard Rails:-

1 Gangway on Port side of centre line from Bridge to Poop.
 Guard Rails 3 feet high, on Bridge + Poop, with 3 rods, stanchions
 Spaced 4' to 5' apart
 Bulwarks 30 steel plates 6 x 3 BA Rail. Stanchions spaced 4' apart

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	32-25	4-25	2-47 x 1-25 2-75 x 1-54	2 1	5-5 # 4-23 = 9-73	9-75
Forward Well	✓	✓	✓			

State position of each freeing port (F. and A. position and height above deck edge)
 After Well:- 2' from bridge + 2' from Poop + 1 midway. 16" above deck
 Forward Well:-
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:- Shutters + 1 bar. Shutters are hinged + are 25" steel plates
 Additional area where sheer is less than standard. ✓

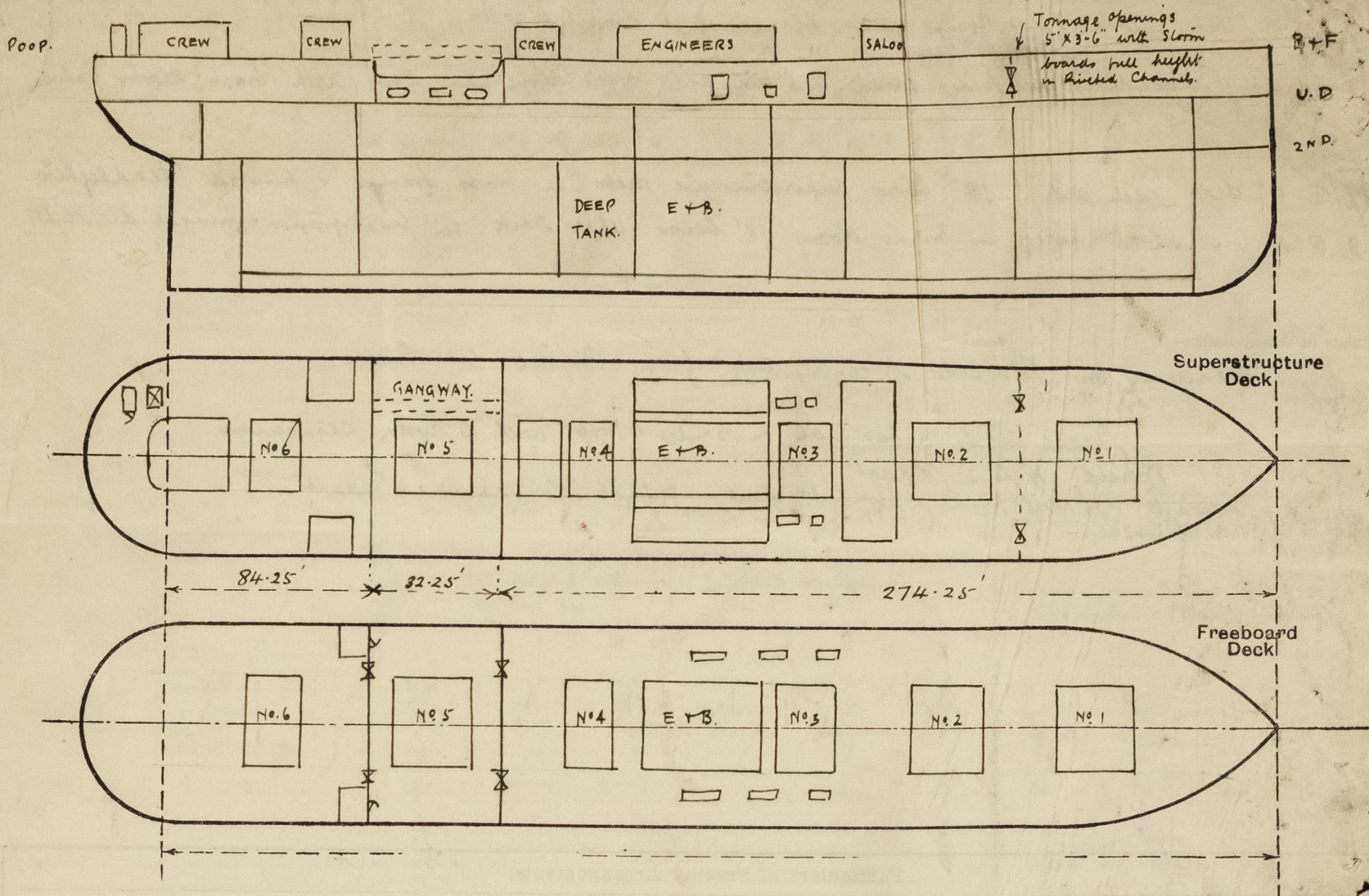
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	44	40	9 x 3 1/2 x 52 L	30	Blk top + Bottom	5' x 3' 5' x 2'	24"	✓
Raised Quarter Deck Bulkhead	✓				none	5' x 4'	24"	✓
Bridge, After Bulkhead	34	30	5 x 3 x 38 L	31"				
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓				✓	4-3 x 2' 4-9 x 2-4	18"	7
Exposed Machinery Casings on Superstructure Decks	34	30	2 1/2 x 2 1/2 x 30	34"				
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	44	30	3 1/2 x 3 x 35	36"		4-4 x 2' 4-9 x 1-11	19"	18
Deckhouses on Flush Deck Ships	30	30	3 x 3 x 30	36"				

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

Poop Bulkhead 2 openings, closed with steel plates secured with bolts + clips spaced 14" apart
 2 hinged steel doors, manipulated from both sides
 Raised Quarter Deck Bulkhead 2 openings, closed with steel plates secured with bolts + clips spaced 14" apart
 Bridge, After Bulkhead 2 openings, closed with steel plates secured with bolts + clips spaced 14" apart
 Bridge, Forward Bulkhead 2 openings, closed with steel plates secured with bolts + clips spaced 14" apart
 Forecastle Bulkhead 2 hinged steel doors manipulated from both sides
 Exposed Machinery Casings on Freeboard or Raised Quarter Decks 2 hinged steel doors 1 1/4" thick with 1" panels manipulated from both sides
 Exposed Machinery Casings on Superstructure Decks 2 " " " manipulated from both sides
 Machinery Casings within Superstructures not fitted with Class I Closing Appliances 2 hinged steel doors manipulated from both sides
 Deckhouses on Flush Deck Ships 3 " " " manipulated from both sides

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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:—

There are no special features.

The Builders have provided the following particulars:—

Moulded Displacement at 85% moulded depth.	=	12626
External " " 27 feet draught.	=	12740 tons, plus per inch 44.28
28 " " "	=	13270 " " " 44.56

Builder's name and yard number *Messrs Wm Gray & Co. Ltd.* Yard *No 897.*

Names of sister ships *"City of Corinth"*

Owners *Ellerman Lines Ltd.*

Fee £ *13* : *12* : .

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