

23 MAY 1932

Index. No. 23665
(For London Office only.)

Expt. C.11.

Clond's Register of Shipping. SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, *Roche*, having *Poop, Bridge and Forecastle* (Type of Superstructures.)

Port of Survey *Lyons*

Date of Survey *19th May 1932*

Name of Surveyor *G. Moffatt*

Particulars of Classification *# 100 A1.*

Ship's Name *"Roche"* Nationality and Port of Registry *Br. Lyons* Official Number *128883* Gross Tonnage *986* Date of Build *1914*

Moulded Dimensions: Length *239.66 ft* Breadth *34'* Depth *16.33'*

Moulded displacement at moulded draught = 85 per cent. of moulded depth *2238* tons

Coefficient of fineness for use with Tables *6.93*

Depth for Freeboard (D) *16.33*

Moulded depth ... *16.4*

Stringer plate ... *.03*

Sheathing on exposed deck *ast*

$T \left(\frac{L-S}{L} \right) = \frac{3.2 \times 19}{239.66} = .28 = .02$

Depth for Freeboard (D) = *16.33*

Depth correction

(a) Where D is greater than Table depth (D - Table depth) R = *(16.33 - 15.976) 1.843 = .74*

(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) *34*

Standard Round of Beam = $\frac{B \times 12}{50} = 8.16$

Ship's Round of Beam = *8.5*

Difference *.34*

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.34}{4} (1 - .69) = .04$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	<i>37.56</i>	<i>18.75</i>	<i>7'3"</i>		<i>18.75</i>
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...	<i>84.37</i>				
Bridge enclosed ...	<i>88.72</i>	<i>63.28</i>	<i>7'3"</i>		<i>63.28</i>
" overhang aft ...					
" overhang forward ...	<i>3.75</i>	<i>1.88</i>			<i>1.88</i>
Fore enclosed ...	<i>35.22</i>	<i>33.28</i>	<i>7'3"</i>		<i>33.28</i>
" overhang ...	<i>2.08</i>	<i>1.02</i>			<i>1.02</i>
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	<i>160.89</i>	<i>118.15</i>			<i>118.15</i>

Standard Height of Superstructure *6.0*

" " R.Q.D. ...

Deduction for complete superstructure *29.97*

Percentage covered $\frac{S}{L} = 67.14$

" " $\frac{S_1}{L} = 49.30$

" " $\frac{E}{L} = 49.30$

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

Percentage from Table, Line B. *45.40*

(corrected for absence of forecastle (if required))

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

Deduction = *10.61*

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	<i>33.97</i>	1		<i>33.97</i>	<i>18.00</i>	<i>18.00</i>	1		<i>18.00</i>
$\frac{1}{2}$ L from A.P. ...	<i>15.12</i>	4		<i>60.48</i>	<i>8.75</i>	<i>8.69</i>	4		<i>34.76</i>
$\frac{2}{3}$ L " ...	<i>3.74</i>	2		<i>7.48</i>	<i>2.00</i>	<i>2.17</i>	2		<i>4.34</i>
Amidships ...	<i>✓</i>	4		<i>✓</i>	<i>0</i>		4		<i>✓</i>
$\frac{2}{3}$ L from F.P. ...	<i>7.47</i>	2		<i>14.94</i>	<i>7.00</i>	<i>7.11</i>	2		<i>14.22</i>
$\frac{1}{2}$ L " ...	<i>30.24</i>	4		<i>120.96</i>	<i>28.75</i>	<i>28.44</i>	4		<i>113.76</i>
F.P. ...	<i>67.93</i>	1		<i>67.93</i>	<i>60.00</i>	<i>60.00</i>	1		<i>60.00</i>
Total ...				<i>305.76</i>					<i>245.08</i>

Mean actual sheer aft = *Deficient*

Mean standard sheer aft

Mean actual sheer forward = *Deficient*

Mean standard sheer forward

Length of enclosed superstructure forward of amidships =

" " aft of " =

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - S}{2L} \right) = \frac{60.68}{18} (75 - 33.57) = +1.40$

If limited on account of midship superstructure.

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 = *16.36*

Summer freeboard = *1.81*

Moulded draught (d) = *14.55*

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = *3.64*

Addition for Winter North Atlantic Freeboard (if required) = *2*

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 2397$

Tons per inch immersion at summer load water line

$T = 14.7$

Deduction = $\frac{\Delta}{40T}$ inches = *4.08*

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{693.65}{1.36} = 509.96$

Depth Correction ... *7.1*

Deduction for superstructures ... *10.61*

Sheer correction ... *1.40*

Round of Beam correction ... *.04*

Correction for Thickness of Deck amidships ... *.24*

Other corrections, scantlings, etc. ...

Summer Freeboard = *29.75*

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

Tropical Fresh Water Line above Centre of Disc ...	<i>7.4</i>	Tropical Fresh Water Freeboard ...	<i>1.9</i>
Fresh Water Line " " ...	<i>4</i>	Fresh Water " " ...	<i>1.5</i>
Tropical Line " " ...	<i>3.4</i>	Tropical " " ...	<i>1.1</i>
Winter Line below " " ...	<i>3.4</i>	Winter " " ...	<i>2.1</i>
Winter North Atlantic Line " " ...	<i>5.4</i>	Winter North Atlantic " " ...	<i>2.3</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Description of Hatchway	No 1	No 2	No 3				
Dimensions of Hatchway	15' x 11'	24' 4 1/2' x 11'	24' 4 1/2' x 11'				
COAMINGS	Height above Deck	30"	30"	30"			
	Thickness	40"	40"	40"			
	Sides	36"	36"	36"			
	Ends	36"	36"	36"			
Stiffeners	...	none	none	none			
	Brackets, Stays	none	none	none			
HATCH BEAMS	Number	2	4	4			
	Spacing	5'-0"	4'-11 1/2"	4'-11 1/2"			
	Scantling and Sketch	16" x 12" by 3/4"	all web plates of steel; brack. plates at ends of all web plates	Same as No 1			
	Bearing Surface	3"	3"	3"			
FORE AND AFTERS	Number	none	none	none			
	Spacing	none	none	none			
	Unsupported Lengths	none	none	none			
	Scantling* and Sketch	none	none	none			
HATCH COVERS	Material	W. Pine	W. Pine	W. Pine			
	Thickness	3"	3"	3"			
	How fitted	2+a	2+a	2+a			
	Bearing Surface	3" x 2"	3" x 2"	3" x 2"			
Spacing of Cleats	24"	24"	24"				
Number of Tarpaulins	3	3	3				

*Are wood fore and afters steel shod at all bearing surfaces? *none*
 Are battens and wedges efficient and in good condition? *yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes*
 Are lashings provided in accordance with rule requirements? *Wood sealing bars 4" x 4" fitted to each hatch.*

Particulars of fiddle, funnel and ventilator coamings:— *Stokehold gratings covered by strong steel hinged covers. Fiddle and funnel seats in efficient condition. Engine skylight of steel, with wooden hinged lids, strongly constructed. Bunker Hatch 12' x 5' 3" with 9" coaming. Fitted with 2+a. W. Wood latches 3 1/2" thick. 1 tarpaulin. battens & wedges in good order. cleats 22" apart.*

Particulars of Flush Bunker Scuttles:— *Two scuttles on freeboard Deck within enc Bridge Space; 18" dia cast Steel, strongly constructed - bayonet joints - ~~no~~ chain attached. fitted*

Particulars of Companionways:— *1 Steel companion 5' 6" x 2' 6" by 7' high on Bridge Deck leading to Enc. Bridge Space; door of teak wood 1 3/8" thick with 13" sill; door fitted with spring lock, opening both sides.*

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

(1) Vents on 1. castle Deck	15" dia. coamings	18" x 3"	led to Fore Hold Space.	Temp closing arrangements to be provided. provided
(1) " " "	6"	15" x 3"	Fore Peak	
(1) " " Fore Well	15"	36" x 3"	Fore Hold	
(2) " " " "	15"	36" x 3"	" "	
(1) " " Enc. Poop	15"	36" x 3"	Aft	
(1) " " " "	7"	36" x 3"	Funnel	
(1) " " Bridge	15"	18" x 35"	Aft Hold	

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

(1) 6.9. air pipe on 1. castle Deck	14" high x 2" dia from	Fore DB tank	Temp closing arrangements to be provided. provided
(1) " " " "	12" x 3"	Fore Peak tank.	
(2) " " " "	4" x 6"	1. castle Space	
(2) " " " "	27" x 2"	Fore DB tank	
(2) " " " "	5' 6" x 2"	Eng. Room DB tank	
(2) " " " "	5' 6" x 2"	Aft DB tank	
(1) " " " "	3' 18" x 2 3/4"	Aft Peak tank	
(2) " " " "	12" x 6"	Poep Space	
(2) 6.9. " " Bridge	12" x 6"	Enc Bridge Space	
(3) " " " "	5" x 5"	" Accomodation	

Parties of Gangway, Cargo & Coaling Ports:—

none.



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Particulars of Scuppers and Sanitary Discharge Pipes —

In Fore Well Deck, 2 scuppers each side discharging through ship's side below fr. Deck.
 4" dia pipe storm valve - none return at ss. - no plug at inner end.
 In Enc. Bridge and Poop Space, 5 scuppers each side similar to above.
 Sanitary Discharges. (1) from f. castle accom. 4" dia pipe discharging below fr. Deck
 fixed with non return valve at ship's side - no trap.
 (2) from Bridge Deck accom. 4" dia pipe discharging below fr. Deck. none return valves
 at ss. and efficient traps.

Particulars of Side Scuttles:

Side scuttles to crew spaces in f. castle + side scuttles in Enc. Bridge
 space fitted with hinged dead lights.
 All scuttles of substantial construction. 1914.

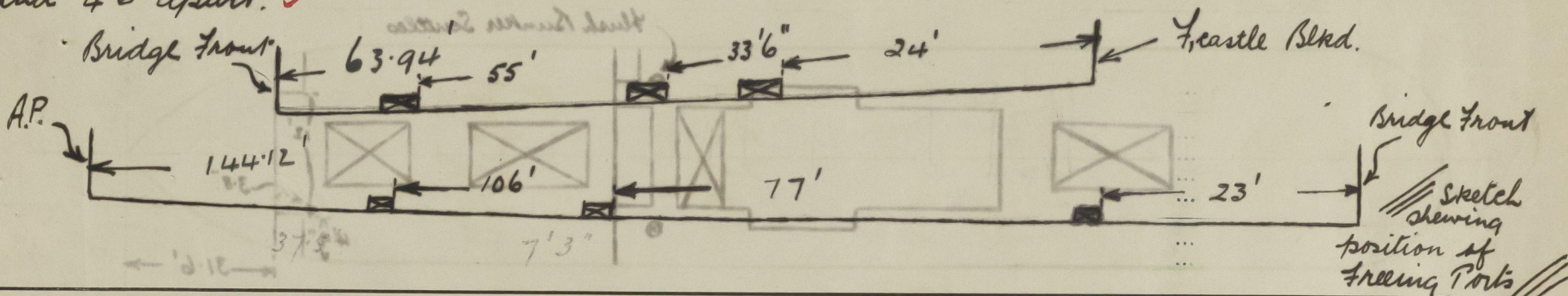
Particulars of Guard Rails:—

Guard rails on f. castle Deck 3'2" high having 3 rods in stanchions
 4ft apart: rails on fore part of deck are portable.

Fore Well Deck; steel bulwarks 7'6" and 4'3" high, efficiently stayed.
 aft " " 7'6" high

Bridge 3'3" high
 aft Bridge + Poop rails 3'3" having 2 rods in stanchions 5' apart.

Particulars of Gangways, Lifelines, etc.:— Gangways fitted from poop to bridge (1 each side) and 1 from
 bridge to forecastle, efficiently supported + having 2 chains in stanchions 3'3" high
 and 4'6" apart.



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Fore Well ...	19.0	7'6"	1'4" x 1'2" 1'6" x 1'6"	1 2	6.72	8.4.
Forward Well ...	59.77	7'6" + 4'3"	2'6" x 1'10"	3	13.71	12.5.

State position of each freeing port (F. and A. position and height above deck edge) { After Well:— Enc. Bridge Space: 12" } See Sketch
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Hinged shutters

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

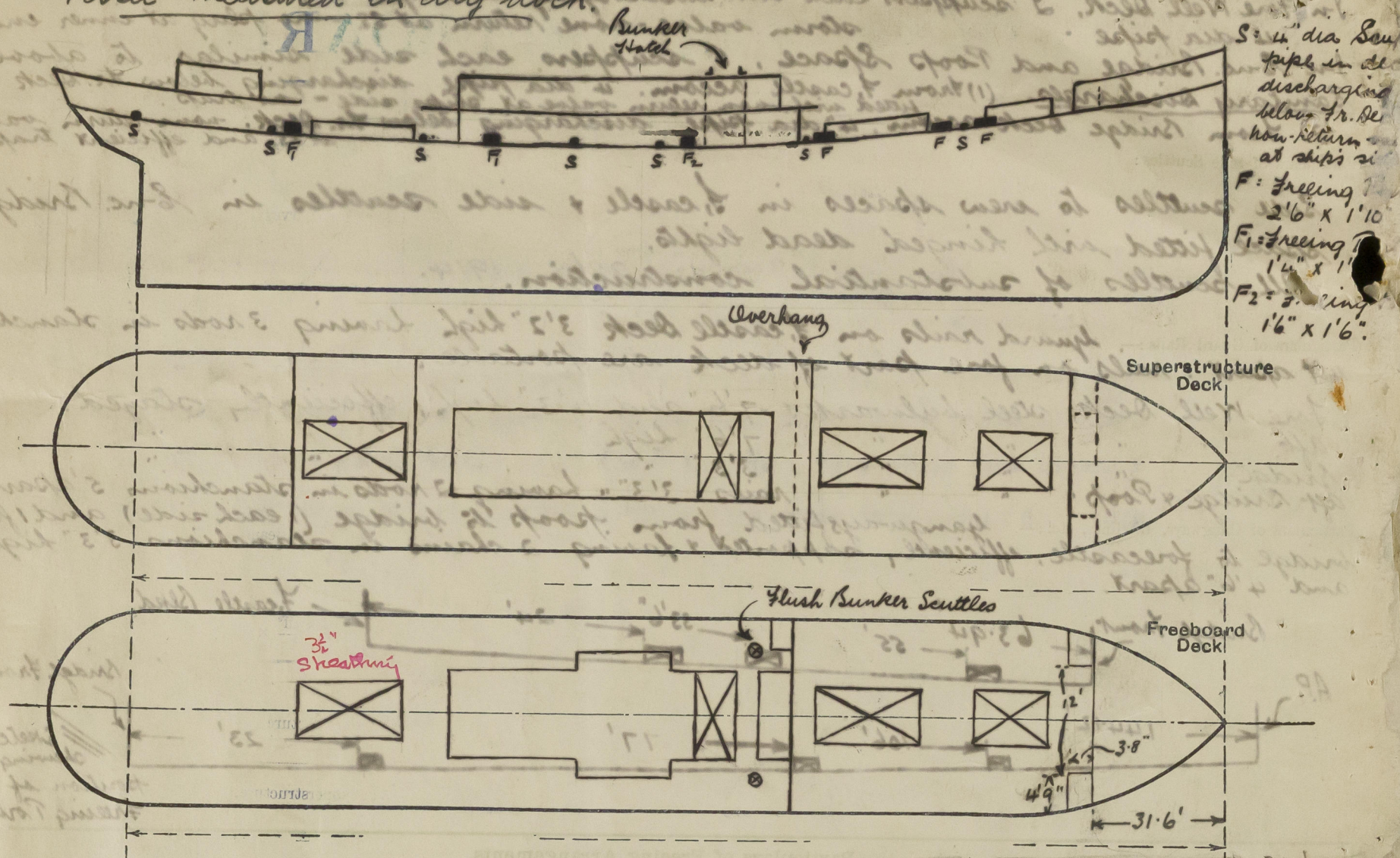
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ... none								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead none								
Bridge, Forward Bulkhead ...	.35	.32	SA. 7" x 3" x .45	33"	Brackets	(2) 4'6" x 3'	1'9"	7'3"
Fore-castle Bulkhead ...	.3	.26	3 x 2 1/2 x .3	3'3"	none	(3) 4'9" x 2'	1'7"	7'3"
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...								
Exposed Machinery Casings on Super-structure Decks ...	.3	.3	3 x 2 1/2 x .3	30"	Brack. at top	(1) 5'4" x 2'	1'1"	7'3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	.3	.26	4 x 3 x .3	3'10"	none	(1) 3'10" x 2'6" (2) 4'8" x 1'11" (1) 2'6" x 2'	1'6" 3'7" 1'8"	14'3"
Deckhouses on Flush Deck Ships ...								

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

Poop Bulkhead ... none	See After Well Bulkhead
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead none	
Bridge, Forward Bulkhead ...	Weather boards 3" thick, full height, in riveted channels.
Fore-castle Bulkhead ...	(3) Leakwood hinged doors 1 1/2" thick, fitted with spring locks opening both sides.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	(1) Leakwood hinged door 1 3/8" thick fitted sp. lock, opening both sides.
Exposed Machinery Casings on Super-structure Decks ...	(2) Steel hinged doors, fitted with sp. locks, opening both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	(3) (these doors lead to bunker space) coach handles opening 1 side only.
Deckhouses on Flush Deck Ships ...	(1) Steel hinged door, fitted with coach handles, closing one side.

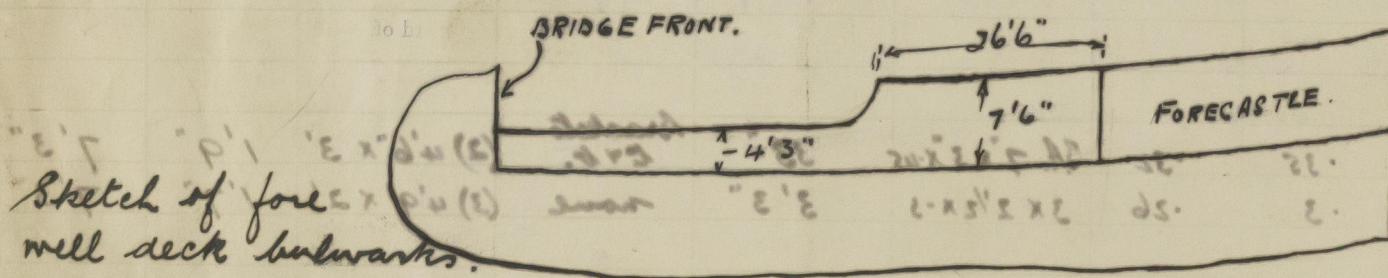
Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—

Vessel measured in dry dock.



OUT.

State any special features in the construction of the ship:— This vessel is provided with an arrangement whereby the aperture in superstructure deck viz: from Bridge Deck to Poop Deck, is fitted with a temporary closing arrangement. This consists of fore & aft hatches 3" thick (wood) supported by a chwartship centre beam (Bull Lee Angle T 8x5x.35" which extends from bulwark to bulwark, supported in brackets and by substantial stanchions. Rest bars for hatches 2½" bearing surface. No battens or tarpaulins are provided.



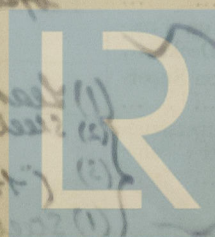
Builder's name and yard number Blyde S.B. & Eng. Co. Ltd. Pt. Glasgow.

Names of sister ships

Owners London, Midland and Scottish Railway Co. Ltd.

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