

Rpt. C.11.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <u>NEWCASTLE</u>
having <u>FORECASTLE BRIDGE AND POOP</u>					Date of Survey <u>11th MARCH /32</u>
<u>LORADORE</u> (Type of Superstructures.)					Name of Surveyor <u>John A. Dawson.</u>
Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build	Particulars of Classification <u>+100.A.1</u>
<u>LORCA</u>	<u>BRITISH LONDON</u>	<u>162525</u>	<u>4875</u>	<u>1931</u>	
Moulded Dimensions: Length <u>393</u> Breadth <u>53.65</u> Depth <u>29.0</u>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth <u>11690</u> tons					
Coefficient of fineness for use with Tables <u>789</u>					

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth ...	<u>29.00</u>	(a) Where D is greater than Table depth (D - Table depth) R =	<u>(29.04 - 26.20)3 = +8.52</u>	Moulded Breadth (B)	<u>53.54</u>
Stringer plate ...	<u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	<u>12.85</u>
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	<u>✓</u>	If restricted by superstructures	<u>✓</u>	Ship's Round of Beam	<u>13</u>
Depth for Freeboard (D) =	<u>29.04</u>			Difference	<u>.15</u>
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	<u>$\frac{.15}{4} \times .5239 = -.02$</u>

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed ...	<u>29.62</u>	<u>29.62</u>	<u>7.0</u>	<u>x 7.43</u>	<u>27.90</u>	Standard Height of Superstructure <u>7.43</u>
" overhang ...						" " R.Q.D.
R.Q.D. enclosed ...						Deduction for complete superstructure <u>41.53</u>
" overhang ...						Percentage covered $\frac{S}{L} =$ <u>47.77%</u>
Bridge enclosed ...	<u>116.87</u>	<u>116.87</u>	<u>7.0</u>	<u>x 7.43</u>	<u>111.87</u>	" $\frac{S_1}{L} =$ <u>47.61%</u>
" overhang aft ...	<u>2.5</u>	<u>1.87</u>				" $\frac{E}{L} =$ <u>45.19%</u>
" overhang forward ...						Percentage from Table, Line A. <u>✓</u>
F'cle enclosed ...	<u>38.75</u>	<u>38.75</u>	<u>7.0</u>	<u>x 7.43</u>	<u>37.81</u>	(corrected for absence of forecastle (if required))
" overhang ...						Percentage from Table, Line B. <u>31.91%</u>
Trunk aft ...						(corrected for absence of forecastle (if required))
" forward ...						Interpolation for bridge less than 2L (if required) <u>.285</u>
Tonnage opening aft ...						Deduction = <u>41.53 x .3191 = -13.25</u>
" forward ...						
Total ...	<u>187.74</u>	<u>187.11</u>			<u>177.58</u>	

SHEER CORRECTION.

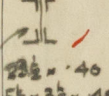
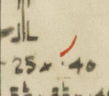
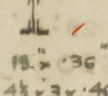
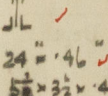
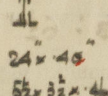
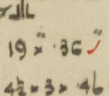
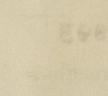
Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	Mean actual sheer aft =	Mean standard sheer aft =
A.P. ...	<u>49.3</u>	1		<u>49.30</u>	<u>57</u>	<u>57.0</u>	1		<u>57.00</u>	<u>Less</u>	
$\frac{1}{4}$ L from A.P. ...	<u>21.94</u>	4		<u>87.76</u>	<u>25</u>	<u>24.69</u>	4		<u>98.76</u>	<u>Less</u>	
$\frac{3}{4}$ L " ...	<u>5.12</u>	2		<u>10.84</u>	<u>6</u>	<u>6.17</u>	2		<u>12.34</u>		
Amidships		4					4				
$\frac{3}{4}$ L from F.P. ...	<u>10.84</u>	2		<u>21.68</u>	<u>14</u>	<u>12.34</u>	2		<u>24.68</u>		
$\frac{1}{4}$ L " ...	<u>43.88</u>	4		<u>175.52</u>	<u>51</u>	<u>49.37</u>	4		<u>197.48</u>		
F.P. ...	<u>98.6</u>	1		<u>98.60</u>	<u>114</u>	<u>114.0</u>	1		<u>114.00</u>		
Total ...				<u>443.70</u>					<u>504.26</u>		
Correction =	Difference between sums of products $\left(75 - \frac{S}{2L} \right) = \frac{60.56}{18} (75 - .2388) = -1.72$										
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.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient	<u>69.33</u>
Depth to Freeboard Deck = <u>29.04</u>	$\Delta =$ <u>11067</u> lbs	Depth Correction ...	<u>8.52</u>
Summer freeboard = <u>5.71</u>	Tons per inch immersion at summer load water line	Deduction for superstructures ...	<u>13.25</u>
Moulded draught (d) = <u>23.33</u>	$T =$ <u>43.20</u> AT <u>24.0</u>	Round of Beam correction ...	<u>.02</u>
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>5.83</u>	Deduction = $\frac{\Delta}{40T}$ inches = <u>6.41</u>	Correction for Thickness of Deck amidships	
Addition for Winter North Atlantic Freeboard (if required) =	<u>10789 = 43.1</u> AT <u>23.0</u>	Other corrections, scantlings, etc. ...	
	<u>10274 = 42.9</u> AT <u>22.0</u>		
		Summer Freeboard = <u>68.42</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>12.4</u>	12	Tropical Fresh Water Freeboard	<u>4.8</u>
Fresh Water Line	<u>6.4</u>	6.4	Fresh Water	<u>5.2</u>
Tropical Line	<u>5.4</u>	5.4	Tropical	<u>5.2</u>
Winter Line below	<u>5.4</u>	5	Winter	<u>6.2</u>
Winter North Atlantic Line			Winter North Atlantic	

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
FREEBOARD D ^o POOP. FB ^o D ^o GAL. SHOOT											
Description of Hatchway	N ^o 1 HATCH	N ^o 2	N ^o 3	N ^o 4	N ^o 5	COAL HATCH	STORE	SKY	SKY	SKY	SKY
Dimensions of Hatchway	29'-3" x 25'-11"	32'-1" x 25'-11"	27'-6" x 21'-11"	32'-1" x 23'-11"	32'-1" x 23'-11"	27'-6" x 21'-11"	9'-2" x 2'-11"	10'-0" x 10'-0"	4'-8" x 2'-10"	5'-10" x 22'-0"	5'-10" x 22'-0"
COAMINGS	Height above Deck	39"	39"	12"	39"	39"	39"	39"	39"	39"	39"
	Thickness	50"	52"	46"	52"	52"	50"	50"	50"	50"	50"
	Sides	44"	44"	44"	44"	44"	44"	44"	44"	44"	44"
	Stiffeners	7 x 3 x 44"	9 x 3 x 44"	✓	9 x 3 x 44"	9 x 3 x 44"	7 x 3 x 44"	✓	✓	✓	✓
HATCH BEAMS	Brackets, Stays	3-22" DIA ^s	3-22" DIA ^s	✓	3-22" DIA ^s	3-22" DIA ^s	3-22" DIA ^s	✓	✓	✓	✓
	Number	4	4	3	4	4	3	ONE	✓	✓	✓
	Spacing	5'-11"	6'-5"	5'-6"	6'-5"	6'-5"	5'-6"	5'-0"	✓	✓	✓
	Scantling and Sketch								✓	✓	✓
FORE AND AFTERS	Bearing Surface	3	3	3	3	3	3	3	3	3	3
	Number	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Spacing	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Unsupported Lengths	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
HATCH COVERS	Scantling and Sketch	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
	Bearing Surface	3	3	3	3	3	3	3	3	3	3
	Material	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.	3/4" W.P.
	Thickness	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
HATCH COVERS	How fitted	F + A	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	3
	Spacing of Cleats	24	24	24	24	24	24	24	24	24	24
	Number of Tarpaulins	3	3	2	3	3	3	3	2	2	2

Particulars of fiddle, funnel and ventilator coamings:— *Stockhold gratings covered by strong steel hinged covers. Fiddle and funnel vents in good condition. Engine skylights 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 Fore D ^o 8 1/2" DIA ^s	COAMING 36" x 36" LED TO STORE.
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "

2	VENTS ON Br. D ^o 14" DIA ^s	COAMING 36" x 36" LED TO SKY
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "
2	" " " " " "	" " " " " " " " " " " "

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

ONE	C.I. AIR PIPE 3 1/2" DIA ^s x 23" HIGH	LED TO FORE PEAK. Fore D ^o
"	" " " " " "	" " " " " " " " " " " "
"	" " " " " "	" " " " " " " " " " " "
"	" " " " " "	" " " " " " " " " " " "
"	" " " " " "	" " " " " " " " " " " "
"	" " " " " "	" " " " " " " " " " " "
"	" " " " " "	" " " " " " " " " " " "
"	" " " " " "	" " " " " " " " " " " "

ONE C.I. AIR PIPE 3 1/2" DIA^s x 38" HIGH. LED TO A-PEAK. on Poop.

Particulars of Gangway Cargo and Coaling Ports:—

NONE.

POSITION	FREEBOARD D ^o	POOP D ^o	BRIDGE D ^o	RAISED QUARTER D ^o	FORECASTLE D ^o
ACCESS TO	FOR STORE	HOLDS (ESCAPE)	HOLD (IN BRIDGE SP)	SKY (ON BRIDGE SP)	STORE
SIZE	4'-0" x 3'-6"	4'-0" x 2'-2"	3'-0" x 2'-0"	2'-0" x 2'-6"	2'-8" x 2'-4"
COAMING	9 1/2" x 40"	31" x 44"	9 1/2" x 40"	9 1/2" x 40"	30" x 40"
COVERS	2 1/2"	3	2 1/2"	2 1/2"	2 1/2"
CLEATS SPACED	15	12	12	12	12
BEARING	3	2 1/2"	2 1/2"	2 1/2"	2 1/2"
TARPAULINS	3	3	2	2	3

Particulars of Scuppers and Sanitary Discharge Pipes

Waste discharges below freeboard deck have cast steel storm valves fitted.
 Lavatory discharges are fitted above freeboard deck and fitted with cast steel storm valves.
 Scuppers from Bridge Space led into into E.R. bilge. Pipes fitted with cork at lower ends.
 (1 each side)

Particulars of Side Scuttles:

all side scuttles to crew space in forecastle provided with hinged deadlights of strong construction.

Particulars of Guard Rails:—

Forecastle 5' : 3'-6" high: 3 tier : about 4 feet apart stanchions.
 Poop 4' : 3'-6" high: 3 tier : stanchions about 4'-2" apart.
 Bridge 8' : 3'-6" : 3 tier : stanchions about 4'-0" apart.

Particulars of Gangways, Lifelines, etc.:

Gangway in forward well. Stanchions 4'-0" high spaced about 14'-9" apart.
 Steel wire set up at ends with tightening screws Port & Starboard.
 Gangway in after well. Stanchions 4'-0" high spaced about 14'-2" apart.
 Steel wire set up at ends with tightening screws. Port & Starboard.
 about 4'-6" from ship's side.

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 ...	110'-0" ✓	3'-6"	3'-10" x 1'-4"	5	25.47	22.0 ✓
Forward Well ...	95'-26" ✓ 98'-6 1/2"	3'-6"	3'-10" x 1'-4"	5	25.47	19.05 ✓

State position of each freeing port (F. and A. position and height above deck edge) } After Well:— 18' 17'-3" from Poop Bulkhead; & about 14'-0" between.
 } Forward Well:— 12' 14'-3" from Forecastle Bulkhead, 13'-0" 12'-3" 13'-0" 12'-6" between.
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— Survival doors 1 for in centre acting as hinge.
 Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

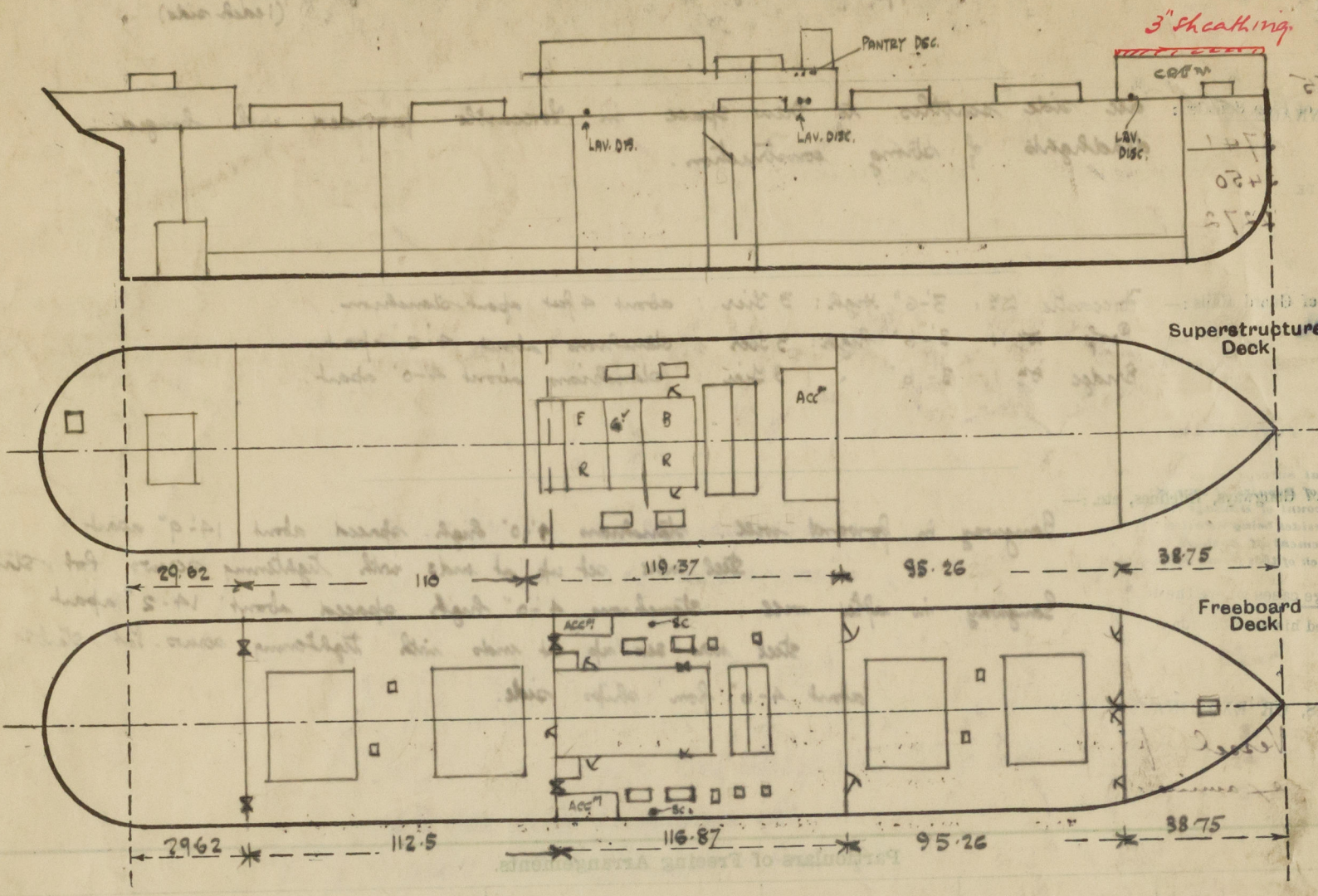
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	.40 ✓	.36 ✓	7 x 3 x 36 L ✓	30" ✓	lugged ✓	4'-6" x 3'-0 1/2" ✓	18" ✓	7.0 ✓
Raised Quarter Deck Bulkhead ...	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead ...	.36 ✓	.30 ✓	6 x 3 x 32 L ✓	30" ✓	✓	✓	✓	✓
Bridge, Forward Bulkhead ...	.44 ✓	.40 ✓	9 x 3 1/2 x 48 F ✓	30" ✓	lugged ✓	4'-6" x 3'-0" ✓	18" ✓	7.0 ✓
Forecastle Bulkhead ...	.30 ✓	.30 ✓	5 1/2 x 3 x 34 L ✓	48" ✓	✓ ✓	4'-6" x 3'-2" ✓	18" ✓	7.0 ✓
Trunk, Aft ...	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward ...	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	.34 ✓	.30 ✓	6 x 3 x 36 L ✓	60" ✓	✓ ✓	4'-6" x 2'-0" ✓	18" ✓	7.0 ✓
Exposed Machinery Casings on Superstructure Decks ...	.34 ✓	.30 8.3 .26 5.6	4 1/2 x 3 x 34 ✓	36" - 34" ✓	1 ✓ ✓	4'-6" x 2'-0" ✓	18" ✓	7.0 ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	.36 ✓	.26 ✓	4 x 3 x 34 ✓	36" 5.4 35" 5.2	✓ ✓	4'-6" x 2'-0" ✓	18" ✓	7.0 ✓
Deckhouses on Flush Deck Ships ...	✓	✓	✓	✓	✓	✓	✓	✓

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

Poop Bulkhead ...	3" wood shifting boards in rivetted channels full height. ✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	3" wood shifting boards in rivetted channels & ordinary steel hinges door to E. Room. + ✓
Bridge, Forward Bulkhead ...	Steel hinged doors 3 hinges on outboard side. 3 clips each side through plating. 1 top bottom no clips on hinged side. Operated on one side.
Forecastle Bulkhead ...	Ord. steel hinged doors. Operated both sides. ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	Ordinary steel hinged door. Operated both sides + (see after Bridge Bulkhead). ✓
Exposed Machinery Casings on Superstructure Decks ...	Ordinary steel hinged door. Operated both sides. ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	Ordinary steel hinged door. Operated both sides. ✓
Deckhouses on Flush Deck Ships ...	✓

Lorca

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:—

Particulars of Superstructure, Trunks, Casings, Deckhouses									
Deck	Casings of Bulk	Casings	Beams & Fastenings	Outside Plating	Bracing	Trunks	Transverse	Longitudinal	Other
1st									
2nd									
3rd									
4th									
5th									
6th									
7th									
8th									
9th									
10th									
11th									
12th									
13th									
14th									
15th									
16th									
17th									
18th									
19th									
20th									

Builder's name and yard number Furness John Readhead & Son, Ltd. : yard No. 504.

Names of sister ships

Owners

Fee £ 12 : 15 : 0 Received by me Paid 7/5/32