

Rpt. C:11.

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

18 JUN 1932

Index. No. 27665  
(For London Office only.)N<sup>o</sup> 100584.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having SHELTER DECK WITH RAISED FOCLE.Port of Survey LIVERPOOL

(Type of Superstructures.)

Date of Survey JUNE 1932

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

NASMYTHDutchBRITISHLIVERPOOL14061965091919-5M.Name of Surveyor S.B. LumsdenMoulded Dimensions: Length 411.5 ✓ Breadth 55.846 ✓ Depth 38.04 ✓ TO SHELTER DKMoulded displacement at moulded draught = 85 per cent. of moulded depth 16590 tonsCoefficient of fineness for use with Tables .787 ✓Particulars of Classification 100A1 SHELTER DK. WITH FREEBOARD ✓

## Depth for Freeboard (D)

Moulded depth ... .. 38.04 ✓stringer plate ... .. .05 ✓

Sheathing on exposed deck

 $T \left( \frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 38.09 ✓

## Depth correction

(a) Where D is greater than Table depth

(D-Table depth) R =  $(38.09 - 27.43) \times 3$ =  $10.66 \times 3 = 31.98$  ✓

(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) 55.846Standard Round of Beam =  $\frac{B \times 12}{50} = 13.31$ Ship's Round of Beam = NONE

Difference

Restricted to

Correction =  $\frac{\text{Diff}^{\circ}}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{13.31}{4} \left( 1 - \frac{.9455}{411.5} \right) = 3.15$ 

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..					
" overhang ... ..					
R.Q.D. enclosed ... ..					
" overhang ... ..					
Bridge enclosed ... ..					
" overhang aft ... ..					
" overhang forward ... ..					
F'cle enclosed ... ..	<u>40.0</u> ✓	<u>22.44</u> ✓	<u>7.5</u> ✓		<u>22.44</u>
" overhang ... ..					
Trunk aft ... ..					
" forward ... ..					
Tonnage opening aft ... ..					
" forward ... ..					
Total ... ..	<u>40.0</u> ✓	<u>22.44</u> ✓			<u>22.44</u>

Standard Height of Superstructure 7.50 ✓" " R.Q.D. — ✓Deduction for complete superstructure 42.00 ✓Percentage covered  $\frac{S}{L} = 9.72$  ✓" "  $\frac{S_1}{L} = 5.45$  ✓" "  $\frac{E}{L} = 5.45$  ✓Percentage from Table, Line A. .0272

(corrected for absence of forecastle (if required))

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction =  $42.00 \times .0272 = 1.14$  ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	51.15	1	51.15	<u>792</u> <u>82.00</u>	<u>82.00</u>	1	82.00		<u>82.00</u>
$\frac{1}{2}$ L from A.P. ... ..	22.76	4	91.04	<u>20</u> <u>20.00</u>	<u>20.00</u>	4	80.00		<u>80.00</u>
$\frac{3}{4}$ L " ... ..	5.62	2	11.24	<u>0</u> <u>0</u>	<u>0</u>	2	<u>0</u>		<u>0</u>
Amidships ... ..	—	4	—	<u>0</u> <u>0</u>	<u>0</u>	4	<u>0</u>		<u>0</u>
$\frac{3}{4}$ L from F.P. ... ..	11.25	2	22.50	<u>0</u> <u>0</u>	<u>0</u>	2	<u>0</u>		<u>0</u>
$\frac{1}{2}$ L " ... ..	45.53	4	182.12	<u>19</u> <u>19.00</u>	<u>19.00</u>	4	<u>76.00</u>		<u>76.00</u>
F.P. ... ..	102.30	1	102.30	<u>95</u> <u>96.00</u>	<u>96.00</u>	1	<u>96.00</u>		<u>96.00</u>
Total ... ..			<u>460.35</u>				<u>334.00</u>		

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{.75 - S}{2L} \right) = \frac{126.35}{18} \left( \frac{.75 - .0486}{411.5} \right) = +4.92$ 

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 = 38.09 ✓Summer freeboard = 10.00Moulded draught (d) = 28.09

Deduction for Tropical freeboard and addition for

Winter freeboard =  $\frac{d}{4}$  inches = 7.02 ✓Addition for Winter North Atlantic Freeboard (if required) = —

## Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 14290$ 

Tons per inch immersion at summer load water line

 $T = 46$ Deduction =  $\frac{\Delta}{40T}$  inches= 7.77@ 28.04 ✓

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.787 + .67}{1.36} = \frac{1.467}{1.36}$ + 1.14Depth Correction ... .. 31.98Deduction for superstructures ... .. 1.14Sheer correction ... .. 4.92Round of Beam correction ... .. 3.15Correction for Thickness of Deck amidships ... .. —Other corrections, scantlings, etc. ... .. —

40.05 1.14 +38.91

Summer Freeboard 49.90 ✓

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

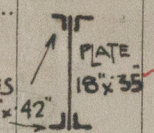
Tropical Fresh Water Line above Centre of Disc ... .. 142Fresh Water Line " " ... .. 73Tropical Line " " ... .. 7Winter Line below " " ... .. 7Winter North Atlantic Line " " ... .. —Tropical Fresh Water Freeboard ... .. 31.98Fresh Water " " ... .. 9.44Tropical " " ... .. 9.44Winter " " ... .. 10Winter North Atlantic " " ... .. —

RECEIVED 16 MAY 1932

RECEIVED 16 JUL 1932



## PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
FREEBOARD OK.									
Description of Hatchway ... ..	1	2	3	4	5	6			
Dimensions of Hatchway ... ..	29'-1"x19'-9"	29'-1"x19'-9"	14'-5"x19'-9"	29'-8"x19'-9"	29'-1"x19'-9"	29'-1"x19'-9"			
COAMINGS {	Height above Deck ...	30 1/2"	AS	AS	AS	AS			
	Thickness { Sides ...	.50"	Nº1	Nº1	Nº1	Nº1			
	Stiffeners ... Ends ...	9"x3 1/2"x50BA.	Nº1	Nº1	Nº1	Nº1			
	Rivets, Stays ...	2	3	NONE	NONE	2	3		
HATCH BEAMS {	Number ...	5	5	2	1	5	5		
	Spacing ...	4'-10"	4'-10"	4'-10"	4'-10"	4'-10"	4'-10"		
	Scantling and Sketch ...		AS	AS	AS	AS	AS		
	Bearing Surface ...	3"	3"	3"	3"	3"	3"		
FORE AND AFTERS {	Number ...								
	Spacing ...								
	Unsupported Lengths ...								
	Scantling* and Sketch ...								
	Bearing Surface ...								
HATCH COVERS {	Material ...	PINE	AS	AS	AS	AS	AS		
	Thickness ...	3"	Nº1	Nº1	Nº1	Nº1	Nº1		
	How fitted ...	F&A.							
	Bearing Surface ...	3"							
Spacing of Cleats ... ..	24"	24"	24"	24"	24"	24"			
Number of Tarpaulins ... ..	3	3	3	3	3	3			

\*Are wood fore and afters steel shod at all bearing surfaces? ✓

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? Yes.

Particulars of fiddley, funnel and ventilator coamings :—

ENGINE ROOM SKYLIGHT OF STEEL STRONGLY CONSTRUCTED ✓  
FUNNEL AND VENTILATOR COAMINGS IN EFFICIENT CONDITION ✓  
GRATINGS COVERED WITH STEEL HINGED ELAPS.

### Particulars of Flush Bunker Scuttles :—

NONE ✓

Particulars of Companionways :—

ENTRANCE TO CREW'S QUARTERS AFT. 0  
2 STEEL DOORS 5'-3" x 2'-0" SILLS 12", CAPABLE OF  
BEING OPERATED FROM EITHER SIDE. ✓

SMELTER OK.

SHELTER DECK

PARTICULARS OF VENTILATORS IN EXPOSED POSITIONS ON FREEBOARD AND SUPERSTRUCTURE DECKS: —

1-9" DIA. VENT. TO FORE PEAK STORE COAMING 3'-5" HIGH X 25 THK. 1-18" " " " NO 1 HOLD " 3'-0" " X 32" ✓	2-7" 4" SWAN NECK VENTS 24" TO LIP TO BUNKER ✓ 1-9" DIA. VENT. COAMING 2'-0" X 35 THK " DEEP TANK ✓ 1-9" " " " 3'-0" X 35" " " " ✓ 4-18" " " " 3'-0" X 38" " " NO 5 HOLD ✓ 4-18" " " " 3'-0" X 38" " " " 6" ✓ 3-12" " " " 2'-10" X 32" " TO CREW ✓ 2-12" " " " 2'-4" X 32" " " ✓ 2-12" " " " 2'-5" X 32" " " SIG. GEAR ✓ 1-12" " " " 2'-3" X 32" " " AFT PEAK STORE ✓	4-7" 4" SWAN NECK VENTS 24" TO LIP TO BUNKER ✓ 2'-0" TO LIP TO NO 6 HOLD ✓ CASING TOP 1-18" DIA. VENT. COAMING 2'-0" X 35 THK ✓ TO BUNKERS ✓ VENTS HAVE WOOD PLUGS AND CANVAS COVERS ✓ EXCEPT SWAN NECKS WHICH HAVE NO MEANS OF CLOSING WOOD PLUGS ✓
--	---	--

PARTICULARS OF AIR PIPES IN EXPOSED POSITIONS ON FREEBOARD, RAISED QUARTER, OR SUPERSTRUCTURE DECKS: —

1-4" DIA. AIR PIPE TO AFT PEAK TANK 21" TO LIP ✓ 1-2" " " " NO 1 O.B. " 25" " ✓ 3-2 1/4" " " " NO 7 O.B. " 19 1/2" " ✓ 1-3" " " " NO 7 " " 19 1/2" " ✓ 4-2 1/4" " " " NO 6 " " 19 1/2" " ✓ 2-5" " " " DEEP TANK " 18" " ✓ 2-2 1/4" " " " NO 5 O.B. " 19 1/2" " ✓	2-3 1/2" DIA. AIR PIPES TO NO 4 O.B. TANK 18" TO LIP ✓ 2-2 1/4" " " " NO 3 " " 19 1/2" " ✓ 2-2 1/4" " " " NO 2 " " 19 1/2" " ✓ 2-2 1/4" " " " NO 1 " " 19 1/2" " ✓ 1-4" " " " FORE PEAK " 19" " ✓ ALL ON FREEBOARD DK. ✓	AIRPIPES CLOSED BY WOOD PLUGS ✓
--	---	---------------------------------

Particulars of Gangway Cargo and Coaling Ports :—

NONE ✓



Particulars of Scuppers and Sanitary Discharge Pipes —

ALL SANITARY DISCHARGES ARE FITTED WITH NON-RETURN VALVES.

Particulars of Side Scuttles:

ALL SIDELIGHTS ARE OF STRONG CONSTRUCTION AND ARE FITTED WITH DEADLIGHTS.

Particulars of Guard Rails:—

GUARD RAILS ON FOCLE DECK 3'-6" HIGH. 3 RODS STANCHIONS 4'-5" APART.  
" " " FREEBOARD DECK 3'-6" HIGH. 3 RODS  
STANCHIONS 4'-4" APART ALL FORE & AFT EXCEPT IN WAY OF SALOON HOUSE.

Particulars of Gangways, Lifelines, etc.:—

Lifelines provided for the protection of the crew forward & aft.  
~~NONE~~

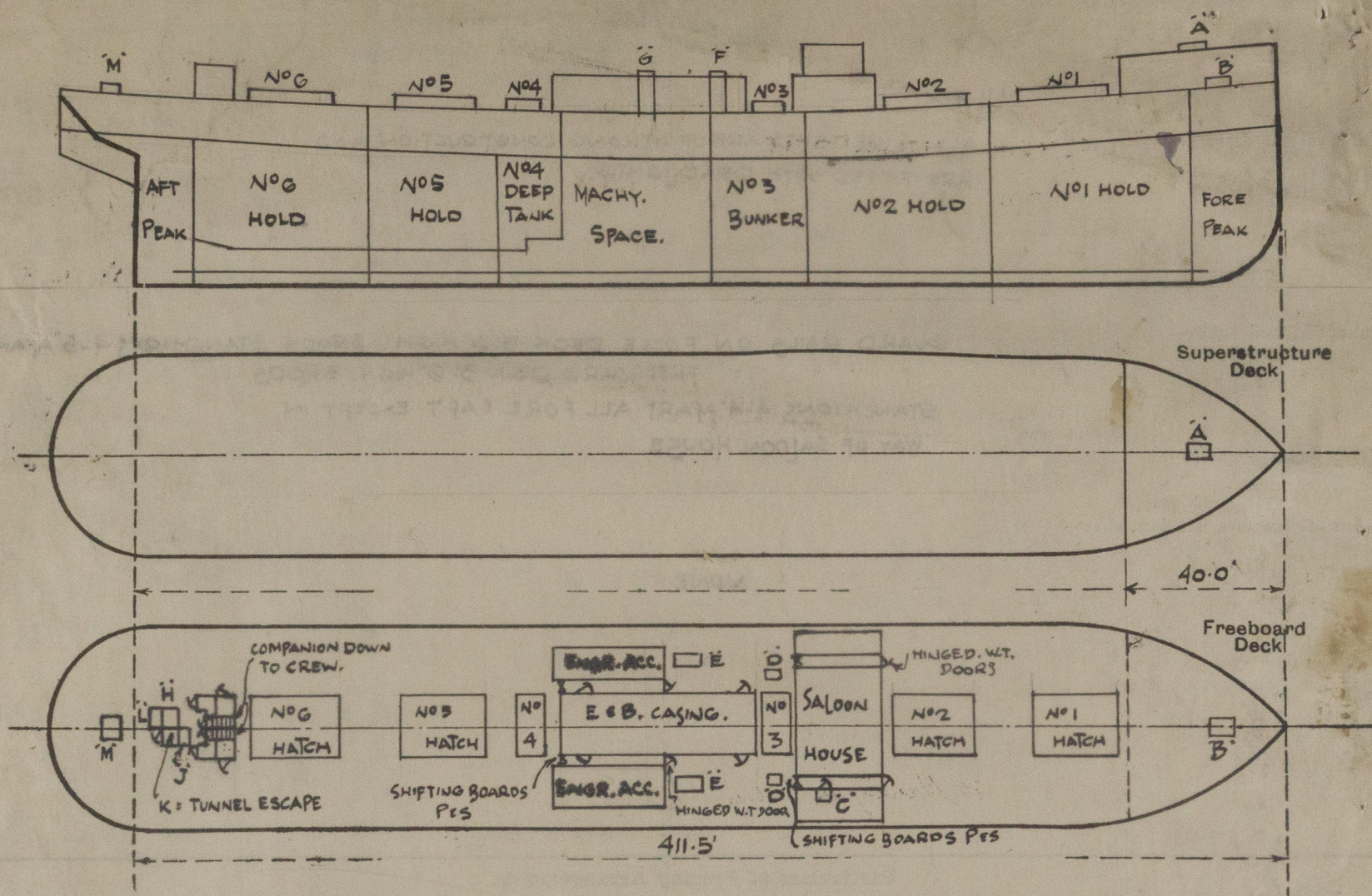
Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ... ..						
Forward Well ... ..						
State position of each freeing port ... .. } After Well:— (F. and A. position and height above deck 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
FORD. BHD. ENGR. HOUSE								
POOP Bulkhead	VERT. PLATING	35	3 1/2 x 3 1/2 x 38	3'-0"	NONE	2@5'-3" x 30"	15"	8'-0"
Raised Quarter Deck Bulkhead	"	30	3 x 3 x 38	3'-6"	NONE	2@5'-2" x 2'-11"	13"	8'-0"
AFT. BHD. HOUSE ENGR. HOUSE	30	25	3 x 3 x 38	3'-0"	NONE	2@5'-2" x 2'-10"	14"	8'-0"
BRIDGE After Bulkhead	48	42	wood lining	2'-5"	wood lining	2@5'-2" x 2'-6"	14"	8'-0"
HOUSE AFT								
BRIDGE Forward Bulkhead								
HOUSE "								
Forecastle Bulkhead ... OPEN								7'-6"
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	38	36	3 1/2 x 3 1/2 x 40	2'-11"	BRACKETS AT TOP	2@5'-2" x 2'-0"	18"	8'-0"
Exposed Machinery Casings on Superstructure Decks ...								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...	SEE ABOVE							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
FORD. BHD. ENGR. HOUSE	2 STEEL HINGED DOORS, RUBBER JOINTED, CAPABLE OF BEING OPERATED FROM EITHER SIDE
POOP BULKHEAD	
AFT BHD. ENGR. HOUSE	SHIFTING BOARDS IN PERMANENT CHANNELS FULL HEIGHT
RAISED QUARTER DECK BULKHEAD	
BRIDGE AFTER BULKHEAD	SHIFTING BOARDS IN PERMANENT CHANNELS FULL HEIGHT
HOUSE	
BRIDGE FORWARD BULKHEAD	STEEL HINGED DOORS, RUBBER JOINTED, CAPABLE OF BEING OPERATED FROM EITHER SIDE
HOUSE	
FORECASTLE BULKHEAD ... OPEN	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	2 STEEL DOORS TO FIDLEY CAPABLE OF BEING OPERATED FROM EITHER SIDE
Exposed Machinery Casings on Super-structure Decks ...	ENGINE CASING IS PROTECTED BY STEEL DECKHOUSE, FIDLEY CASING ONLY EXPOSED
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	2 STEEL DOORS INSIDE PASSAGE ARE CAPABLE OF BEING OPERATED FROM EITHER SIDE
Deckhouses on Flush Deck Ships ...	



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:—



M = ENTRANCE TO STG. GEAR OF STEEL 3'-6" x 2'-5"  
COAMING 2'-7" x 30" HINGED STEEL COVER  
WITH PADLOCK ✓

THIS VESSEL WAS SURVEYED AFLOAT FOR FREEBOARD.  
BUT SPECIAL SURVEY IS BEING CONTINUED AND IT IS STATED  
WILL BE COMPLETED AT THIS TIME. VESSEL WILL BE DRY

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

A = HATCH ON FOCLE DK. 2'-0" x 2'-0"  
COAMING 12" x 40". 2 1/2" WOOD  
COVER. CLEATS. 12" APART, 1 TARPULIN  
B = HATCH TO F.P. STORE 2'-10" x 2'-9"  
COAMING 12" x 40", CLEATS. 20" APART.  
2 1/2" WOOD COVERS. 2 TARPULINS ✓

F = HATCH ON CASING TOP 19'-2" x 4'-10"  
6' x 3' x 42" B.A. COAMING. 3" BEARING SURFACE  
CLEATS. 24" APART. 3" WOOD COVERS  
2 TARPULINS ✓

G = HATCH ON CASING TOP 19'-2" x 5'-1"  
9' x 3 1/2' x 48" B.A. COAMING. AS 'F' ✓

H = ENTRANCE AFT TO STORE 3'-6" x 2'-10"  
COAMING 30" x 30" WITH STEEL HINGED COVER  
WITH PADLOCK.

C = TRIMMERS ESCAPE, 2'-0" x 18 1/2" OPENING IN DK  
PROTECTED BY STEEL DOOR 5'-3" x 18". SILL 15"  
CAPABLE OF BEING OPERATED FROM EITHER SIDE.

J = LIGHT & AIR TO CREW 2'-0" x 18". COAMING 15" x 30" OF STEEL.  
WOOD HINGED COVER WITH CIRCULAR LIGHT.

D = COALING HATCH 2'-2" x 2'-2". COAMING 24" x 40"  
CLEATS 14" APART. 2 1/2" WOOD COVERS 2 TARPULINS ✓

K = TUNNEL ESCAPE OF STEEL OPENING IN DK. 2'-6" x 2'-5"  
WITH STEEL DOOR 3'-9" x 22 1/2". SILL 12" CAPABLE  
OF BEING OPERATED FROM EITHER SIDE.

E = COALING HATCH 5'-4" x 2'-9 1/2" COAMING 30" x 40"  
CLEATS 20" APART. 2 1/2" WOOD COVERS  
2 TARPULINS ✓

L = LIGHT & AIR TO CREW'S MESS OF STEEL 3'-5" x 19 1/2"  
COAMING 14 1/2" x 30" WOOD HINGED COVER WITH  
2 CIRCULAR LIGHTS.

Builder's name and yard number HARLAND & WOLFF LTD.

Names of sister ships. 'NEWTON'

Owners LIVERPOOL, BRAZIL & RIVER PLATE S.N. CO. LTD.

Fee £ 14 : 9

Received by me



© 2019

Lloyd's Register  
Foundation