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Index No. 33462
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Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

18 JAN 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

ZYPENBERG

(Type of Superstructures.)

Port of Survey

Hull

Date of Survey

17th January 1933

Name of Surveyor

J. H. Engledow

Particulars of Classification

+100 F.I.

Ship's Name

S.S. CHARTERHURST

Nationality and Port of Registry

Dutch - Amsterdam

Official Number

148320

Gross Tonnage

4965

Date of Build

1930-3.

Moulded Dimensions: Length

404.75

Breadth

53.29

Depth

28.0

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

11,770

tons

Coefficient of fineness for use with Tables

.803.

Depth for Freeboard (D)

Moulded depth

28.0

Stringer plate

.40

Sheathing on exposed deck

FEEL DECK 5.12 1/2

$T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) =

28.04

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R =

(28.04-26.98) 3 = 3.18

(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)

53.29

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

12.79

Ship's Round of Beam =

13.1

Difference

.71

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.71}{4} \times \left(1 - \frac{.1808}{1} \right) = .13$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	25.75	25.75	7'6"		25.75
overhang ...					
R.Q.D. enclosed ...					
overhang ...					
Bridge enclosed ...	26.08	26.08	7'6"		26.08
overhang aft ...	2.25	1.69			1.69
overhang forward ...	2.25	1.04			1.04
F'cle enclosed ...	37.0	37.00	7'6"		37.00
overhang ...					
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	333.17	331.54			331.54

Standard Height of Superstructure

7.50

R.Q.D.

Deduction for complete superstructure

42.0

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

82.31

$\frac{S_1}{L} =$

81.92

$\frac{E}{L} =$

81.92

Percentage from Table, Line A.

(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 =

32.63

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	50.47	1		50.47	72	72.00	1		72.00
1/2 L from A.P. ...	22.46	4		89.84	31 1/2	31.60	4		126.40
2/3 L " ...	5.55	2		11.10	8	7.90	2		15.80
Amidships ...		4					4		
2/3 L from F.P. ...	11.10	2		22.20	15 3/4	15.80	2		31.60
1/2 L " ...	44.92	4		179.68	63	63.20	4		252.80
F.P. ...	100.95	1		100.95	144	144.00	1		144.00
Total ...				454.24					642.60

Mean actual sheer aft = Excess
Mean standard sheer aft

Mean actual sheer forward = Excess
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = .32

" " aft of " = .336

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{188.36}{18} \left(75 - \frac{411.5}{2} \right) = 3.54$

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 = 28.04

Summer freeboard = 3.88

Moulded draught (d) = 24.16

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = 6.04 = 6

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 11,872$

Tons per inch immersion at summer load water line

$T = 43.8$

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

= 6.78 = 6 3/4

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc.

72.97
79.58

3.18

32.63

3.54

.03

3.18

36.20

33.02

Summer Freeboard = 46.56

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

Tropical Fresh Water Line above Centre of Disc

Fresh Water Line

Tropical Line

Winter Line below

Winter North Atlantic Line

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

3-10 1/2 = 118 1/2

2-9 3/4 = 86

3-3 3/4 = 101

3-4 1/2 = 103

4-4 1/2 = 133

19 JAN 1933

MARKING FORM

2 SEPARKING FORM

RECEIVED

RECEIVED

MARKING FORM

21 JAN 1933

RECEIVED

RECEIVED

009976-009985-0009 1/2

				HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS							
				UPPER D ^K	UPPER D ^K	UPPER D ^K	UPPER D ^K	UPPER D ^K	UPPER D ^K	UPPER D ^K	UPPER D ^K
				N° 1	N° 2	N° 3	N° 4	N° 5	N° 6	N° 7	N° 8
Description of Hatchway	N° 1	N° 2	N° 3	N° 4	N° 5	N° 6	N° 7	N° 8
Dimensions of Hatchway	31'3" x 24'0"	33'9" x 24'	31'6" x 24'	38'3" x 24'	33'9" x 24'	33'9" x 24'	24'9" x 24'	18'0" x 24'
COAMINGS	{	Height above Deck	...	36"	100 3/4 x .50	100 3/4 x .50	9 1/2 x 3 1/2 x .60	100 3/4 x .50	30"	30"	30"
		Thickness { Ends44	.44	.44	.44	.44	.44	.44	.44
		Stiffeners	7 x 3 x .40	-	-	-	7 x 3 x .37	7 x 3 x .40	7 x 3 x .37	7 x 3 x .35
		Brackets, Stays	3 stays 2" Dia	-	-	-	3 stays 2" Dia	3 stays 2 1/2" Dia	1 stay 2" Dia	3 stay 2" Dia
HATCH BEAMS	{	Number	5	6	5	NONE.	7	6	5	3
		Spacing	EQUAL	EQUAL	EQUAL	EQUAL	EQUAL	EQUAL	EQUAL	EQUAL
		Scantling and Sketch	...	27' x 18' x .40 5 x 3 x .47	19 1/2 x .40	21' x .40	19 1/2 x .40	19 1/2 x 16 1/2 x .37	16 1/2 x .37	19 x .36	18' x .36
		Bearing Surface	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2	3 1/2
FORE AND AFTERS	{	Number								
		Spacing								
		Unsupported Lengths	...								
		Scantling* and Sketch	...								
Bearing Surface	...										
HATCH COVERS	{	Material	W.P.	W.P.	W.P.	STEEL PLATE COVERS .60" THICK .VITA 7/8 BARS 8" APART	W.P.	W.P.	W.P.	W.P.
		Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"
		How fitted	...	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
Spacing of Cleats	24"	24"	24"	✓	24"	24"	24"	24"	24"
Number of Tarpaulins	3	NONE.	NONE.	✓	NONE.	3	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? 3 1/2 manilla lashings provided for Nos 1-6 upper deck & N° 5 2-3-4-5 / Bridge deck hatch with wing plates on longitudinal rated web stiffener ✓

Particulars of fiddle, funnel and ventilator workings:—
Coal hatch 4-6 x 18 x 20 ft. strong construction.
Tapeaulin, masonry and cleats.
Engine room skylight rated strong construction.
Jelly skylight rated strong construction.
2 Boiler room ventilators, 2 Engine room ventilators, 9-6" dia mushroom vents to cabin, 1 Iron rush vent to W.C.
all in good condition.
Fidley galvanized sheet iron cover hinged in good condition.

Particulars of Companionways:—

*None fitted. arranged whole upper floors
by means of Stairs.*

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

FLE DECK 3 COAL VENTS		TRIDGE DECK 20 VENTS		To N. H. HOLD		19' DIA		36' x 40' COAL VENT	
1	TO HOLD 18' x 18' x 28	2	TO N. H. HOLD	2	TO N. H. HOLD	10'	TO N. H. HOLD	36' x 40'	
1	TO HOLD 18' x 30' x 40	2	TO N. H. HOLD	2	TO N. H. HOLD	10'	TO N. H. HOLD	36' x 40'	
1	TO HOLD 18' x 30' x 40	2	TO N. H. HOLD	2	TO N. H. HOLD	10'	TO N. H. HOLD	36' x 40'	
2	TO HOLD 18' x 30' x 40	2	TO N. H. HOLD	2	TO N. H. HOLD	10'	TO N. H. HOLD	36' x 40'	
UPPER	AFTER WELL	2	TO N. H. HOLD	2	TO N. H. HOLD	10'	TO N. H. HOLD	36' x 40'	
	TUNNEL 10' x 36' x 37	2	TO N. H. HOLD	2	TO N. H. HOLD	10'	TO N. H. HOLD	36' x 40'	

Wood plies and canvas covers are supplied for all ventilators

Particulars of Air Pipes in exposed positions on freeboard, raised above water level.									
UPPER DECK	UPPER FORECASTLE	GOOSE NECK	WATER TANK	24"	DIA	17'	TO MOUTH	PORT & STARBOARD	
	FORE WELL			24"	"	12'	"	"	"
BRIDGE				3'	"	12'	"	"	"
				24"	"	12'	"	"	"
UPPER	AFTER WELL			6'	"	12'	"	"	"
				6'	"	15'	"	PORT ONLY	
POOD			AFTER DECK	3'	"	8'	"	1 OFF.	
			TANK						

*Wood plugs and stuffing details
supplied for all air pipes
supplied*

Particulars of Gangway Cargo and Coaling Ports:—

NONE FITTED.

Chapterhurst

For well upper deck 1 P. 15 COLLINGS PATENT SCUPPER
after 1 P. 15

Upper deck in bridge space 3 P and 3 S. 3 1/2 dia with storm valve at ship side

Bridge deck 3 P. 3 S Collings patent scupper.

near N.C. Port and starboard on upper deck, round 4" discharges direct outward above upper deck.

Bridge Deck 3 P. 3 S 4" S.V. discharges 18" above upper deck

BATH 1/2 P.O.C.	18"
WATER 1/2	18"
WASTE 1/2	18"
ADJUTANT 1/2	20"
OFFICERS N.C. 4" S.V.	20"
BATH 1/2 P.O.C.	20"

Particulars of Side Scuttles:—

WOOD GLASS FRONT
upper deck
2' 6"
K

Particulars of Side Scuttles:—

*In fore and after side to cross spaces 9' dia of strong construction
all fitted with deadlights.*

Particulars of Guard Rails:—

FELE DECK	3' 3" HIGH,	Spaced 5' 6" apart	2 Rows 3/4 Dia.
BRIDGE	3' 6"	5' 4"	3 " 1-7/8" • 2- 3/4 Dia.
POOP	3' 3"	5' 0"	2 " 3/4 Dia.

FORE AND AFTER WELLS AND MIDSHIP PORTION OF BRIDGE DECK STEEL FRAMEWORKS.

Particulars of Gangways, Lifelines, etc.:-

Crew berthed in forecabin. Manila lifelines 3 1/4" supplied between side front and bridge front with eye bolts fitted 1/4" side body front. and suitable provision made for lifelines elsewhere where required by the crew in the regular working of the ship.

BRIDGE DECK STEEL BULWARK MIDSHIP PORTION.

SIDE HOUSE 2 1/2' NORTH EACH SIDE 4' 0" x 1' 8" MIDSHIP HOUSE BRIDGE DECK.

118' 0" 71' 6" 6' 0" GROOVE DECK 42' 6"

AFTER WELL BULWARKS 6' 8" 19' 10" FORE WELL BULWARKS.

BRIDGE END BRIDGE FRONT FORECASTLE FRONT

← 25'2" / 7'5" →		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	38.0 40.6	4'0"	3'7" x 1'6 1/2"	2	11.0	10.3	
Forward Well	35.5 33.4	4'0"	3'5" x 1'6 1/2"	2	10.6	9.84	

* 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:—

HEIGHT ABOVE DECK AFTER WELL 15" FORWARD WELL 12"

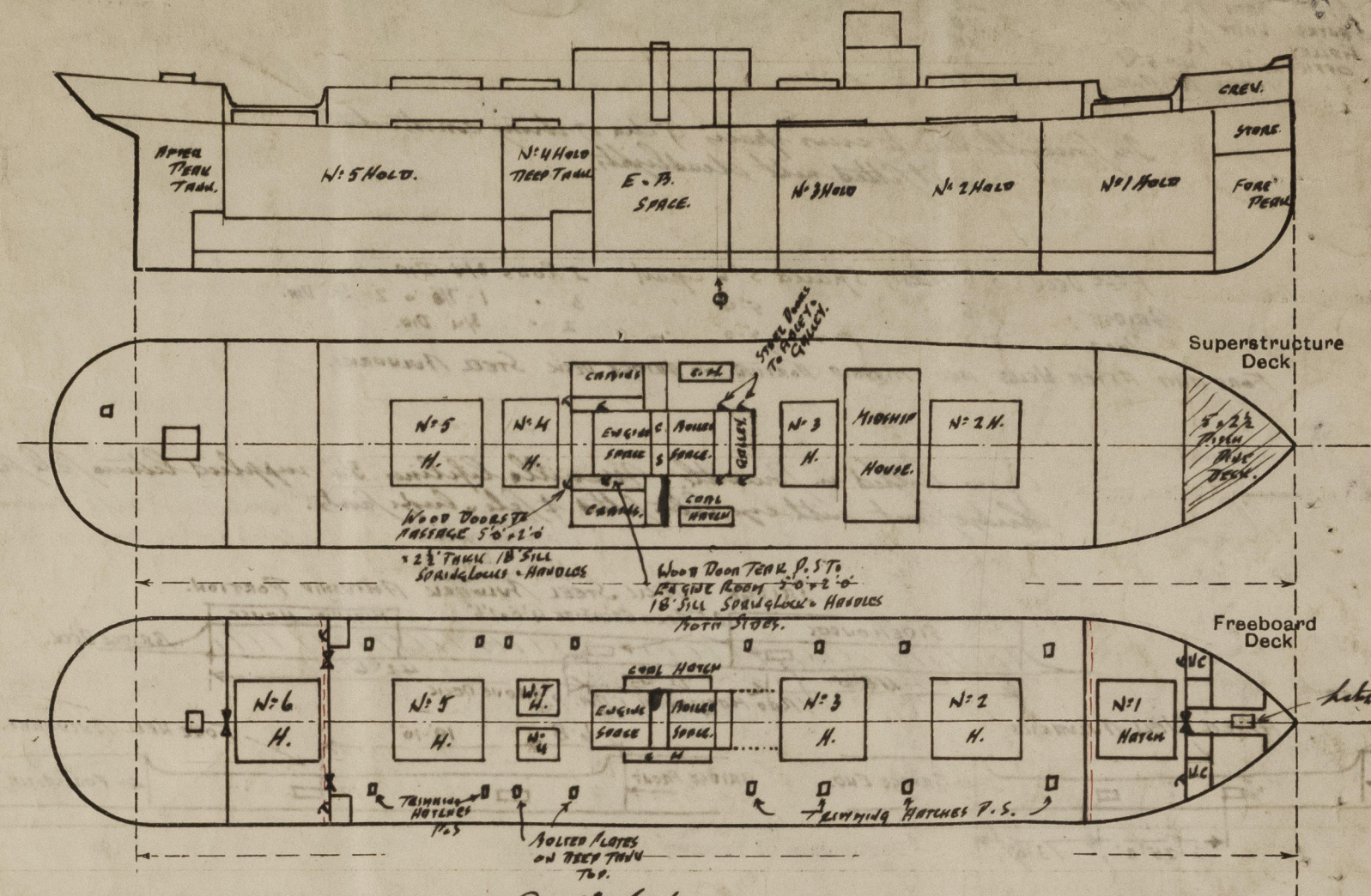
1 HORIZONTAL RAIL 1" HIGH TO EACH PORT.

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	✓ 45	✓ 40	6 x 3 x 40	30"	WELDED TOP AND BOTTOM	1 OPENING IN CASING 5'-6" x 4'-0"	1'-7"	7'-6"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓ 25	✓ 25	3/4" FLANGE OF 20400 PLATE	3'-3"	NONE	2 OPENINGS 5'-0" x 3'-3"	1'-5"	7'-6"
Bridge, Forward Bulkhead	✓ 45	✓ 40	8 x 3 x 45	30"	WELDED TOP AND BOTTOM	NO OPENINGS	✓	7'-6"
Forecastle Bulkhead	✓ 25	✓ 25	3/4" FLANGED PLATES	2'-8"	NONE	2 WOOD DOORS 4'-11" x 4'-0" 1 CASING OPENING 4'-11" x 3'-7"	1'-7"	7'-6"
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Super-structure Decks	✓ 40	✓ 35	3 x 2 1/2 x 28	30"	WELDED TOP	4 WOOD DOORS 4'-7" x 2'-8" 2 WOOD " 4'-11" x 2'-0"	1'-8" 1'-6"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓ 35	✓ 35	3 1/2 x 2 1/2 x 30	27"	NONE	NO DOORS	2	7'-6"
Deckhouses on Flush Deck Ships ...	✓							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	1 CENTRE OPENING 2 1/2' STORM DOORS 1/4" RIVETED CHANNELS FULL HEIGHT OF OPENING. <i>specimens supplied</i>
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	2 OPENINGS CLOSED IN 3' STORM DOORS 1/4" RIVETED CHANNELS FOR FULL HEIGHT OF OPENING. <i>2 steel doors to stage a lower room</i>
Bridge, Forward Bulkhead	NO OPENINGS. <i>spring locks handles both sides</i>
Forecastle Bulkhead	2 WOOD DOORS TO MENUS N.C. <i>spring locks and handles both sides. ✓ Open in centre</i>
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	2 STEEL DOORS TO GALLEY } <i>✓</i>
Exposed Machinery Casings on Superstructure Decks	2 WOOD } LEVER FASTENERS TO BE FITTED TO OPERATE FROM BOTH SIDES
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	2 WOOD } <i>✓</i>
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 shown on the following sketches:—



Small details.

- Upper deck under foremast to stern and chain locker 6'0" x 3'0" Coaming 9 1/2" x 3 1/2" 40", 2 1/2" Wood
Covers, 1 tarpaulin, bottom and cleats. 2 3/4" Reeling surface. ✓
- Bridge deck coal hatch port. standard 15'9" x 4'6" Coaming 28 1/2" x 40", 2 1/2" COVERS, 2 Tarpaulins
Bottom and cleats. 3" Reeling surface. ✓
- Upper deck in bridge space at coaming under P.S. 24'9" x 4'0" Coaming 10 x 3 1/2" 45", 2 1/2" COVERS
TARPULINS 3" Reeling surface, bottom and cleats.
- Upper deck in bridge space forward of main coaming Trimming hatches 2 off 2'6" x 3'0", 6 off 1'9" x 2'6" } COAMINGS 10 x 3 1/2" 42" 2 1/2" Wood HINGED COVER
2 off 2'0" x 2'6", 2 off 2'6" x 3'0" } 3" Reeling surface, secured by 2 lugs and 2
Portion. No bottom or cleats fitted
- Upper deck on top of deep tank 2 P. 25 BOLTED PLATES 2'0" x 1'9" opening, plate 1/2" THICK.
Secured by 3/4" Studs through top of 14" chest
Centre beam 9'10" x 30" plate angles 3" x 3" 30
- Port deck to prop space 8'0" x 8'0" Coaming 30 x 30, 2 1/2" COVERS 2 1/2" Reeling surface 3"
STORE 3'0" x 3'0" 6 x 3 1/2" 40L. 2 1/2"
- Upper deck in prop space to after peak 4'0" x 4'0" U.T. hatch 8" Coaming with plate top riveted to main bulkhead entrance to tank.

This vessel has been runged while lying afloat
in the Alexander Dock at Hull.

Builder's name and yard number AYRSHIRE DOCKYARD CO. LTD / RINE. YARD N° 515.

Names of sister ships

Owners H. LITHGOW. (LEWIS AND GROVE WILLIAMS)

Fee £ 12 : 15 - Received by me



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