

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

-3 JUL 1933

Computation of Freeboard for ~~Steamer~~ Sailing Ship, Tanker

having

Roof, Bridge & Forecastle

Port of Survey

Billao

Date of Survey

23 May 1933

Name of Surveyor

J. C. Rendall

Particulars of Classification

100 A.I.

Carrying Petroleum in Bulk.
Longitudinal Framing.

Ship's Name

"REMEDIOS"

Nationality and Port of Official Number Registry

Spanish
San Sebastian

Gross Tonnage

4461

Date of Build

1921-9

Moulded Dimensions: Length 112.672 m. Breadth 14.706 m. Depth 9.144 (30')
(369.5') (48.25')
Moulded displacement at moulded draught = 85 per cent. of moulded depth 9908

Coefficient of fineness for use with Tables

.770

Depth for Freeboard (D)

Moulded depth ... 30' ... 9.144
Stringer plate ... 0.6" ... 0.0152

Sheathing on exposed deck

T (L-S) =

Depth for Freeboard (D) = 9.159

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R = 833 (9.159 - 7.508) 2844

= + 391

(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) 48.25' = 14.706 m

Standard Round of Beam = $\frac{B \times 12}{50}$ = 294

Ship's Round of Beam 11 1/4" = 0.2984

Difference 4 1/4" excess

Restricted to

Correction = $\frac{\text{Diff}^e}{4} \times (1 - \frac{S_1}{L})$ = $\frac{4}{4} \times .542$ = -1 1/4

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ... 99'	30.17	30.17	2.286		30.17
" overhang ... 4'	1.24	.61			.61
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ... 32'	9.75	9.75	2.286		9.75
" overhang aft ...					
" overhang forward ...					
Fore enclosed ... 33' 9"	9.18	9.18	2.286		9.18
" overhang ... 2' 4"	0.78	1.87			1.87
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" forward ...					
Total ...	52.19	51.58			51.58

Standard Height of Superstructure

2196

" " R.Q.D.

Deduction for complete superstructure

1015

Percentage covered $\frac{S}{L}$ = 46.35%" " $\frac{S_1}{L}$ = 45.80%" " $\frac{E}{L}$ = 45.80%Percentage from Table, Line A. Tanker 36.80%
(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 = 1015 x .368 = - 373

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	1192	1		1192	1346	1346	1		1346
1/8 L from A.P. ...	530	4		2120	572	572	4		2288
3/8 L " ...	132	2		264	143	143	2		286
Amidships ...		4			0		4		
5/8 L from F.P. ...	265	2		530	268	268	2		536
7/8 L " ...	1059	4		4236	1073	1073	4		4292
F.P. ...	2384	1		2384	2413	2413	1		2413
Total ...	10728			10726					11161

Correction = $\frac{\text{Difference between sums of products}}{18}$ (75 - $\frac{S}{2L}$) = $\frac{435}{18} (.75 - .2317)$ = -13

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 = 9.159

Summer freeboard = 1509

Moulded draught (d) = 7.650

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{48}$ inches = 1597

Addition for Winter North Atlantic Freeboard (if required) = 927

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 Δ =

Tons per inch immersion at summer load water line

T =

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

= 1597

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient

 $\frac{77+68}{1.36} = \frac{145}{1.36}$

Depth Correction ...

Deduction for superstructures ...

Sheer correction ...

Round of Beam correction ...

Correction for Thickness of Deck amidships

Other corrections, scantlings, etc. ...

Summer Freeboard = 1509

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

Tropical Fresh Water Line above Centre of Disc	12.52	318
Fresh Water Line	6.26	159
Tropical Line	6.26	159
Winter Line below	6.26	159
Winter North Atlantic Line	9.88	251

Tropical Fresh Water Freeboard ...

Fresh Water

Tropical

Winter

Winter North Atlantic

1509 m = 59.41"

1191 " = 46.89"

1350 " = 53.15"

1350 " = 53.15"

1668 " = 65.67"

1760 " = 69.29"

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											← Pool →	
Description of Hatchway			Journal		Cargo Deck	Sumner	Cofferdam	Fore Roof	O.F. Deck	O.F. Deck	Cofferdam	Cargo Deck
Dimensions of Hatchway			Upper Deck	Lower Deck	16	14	4	Run Deck	2	2	2 over	16
COAMINGS	Height above Deck	...	16' x 12'	16' x 12'	6' x 4'	6' x 3'	2' x 2'	3' x 3'	2' x 2'	3' x 2' 6"	20' x 16"	16' x 12'
	Thickness Sides	...	30"	30"	6"	3' 6"	6"	2' 6"	3' 6"	2' 6"	6"	2' 6"
	Thickness Ends	...	44"	44"	1/2"	1/2"	3/8"	7/16"	1/2"	1/2"	3/8"	3/8"
	Stiffeners	...	44"	44"	1/2"	1/2"	3/8"	7/16"	1/2"	1/2"	3/8"	3/8"
HATCH BEAMS	Number	...	7" B.A.	7" B.A.	7" B.A.	7" B.A.	7" B.A.	7" B.A.	7" B.A.	7" B.A.	7" B.A.	7" B.A.
	Spacing	...	3'	3'	3'	3'	3'	3'	3'	3'	3'	3'
	Scantling and Sketch	...	11" x 3"	11" x 3"	11" x 3"	11" x 3"	11" x 3"	11" x 3"	11" x 3"	11" x 3"	11" x 3"	11" x 3"
	Bearing Surface	...	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
FORE AND AFTERS	Number	...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Spacing	...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Unsupported Lengths	...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Scantling* and Sketch	...	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HATCH COVERS	Material	...	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
	Thickness	...	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
	How fitted	...	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
	Bearing Surface	...	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
Spacing of Cleats			10-1 1/2"	10-1 1/2"	10-1 1/2"	10-1 1/2"	10-1 1/2"	10-1 1/2"	10-1 1/2"	10-1 1/2"
Number of Tarpaulins			2	2	2	2	2	2	2	2
*Are wood fore and afters steel shod at all bearing surfaces?												
Are battens and wedges efficient and in good condition?												
Are tarpaulins in good condition and in accordance with rule requirements?												
Are lashings provided in accordance with rule requirements?												

Particulars of fiddley, funnel and ventilator coamings:— Fiddley openings fitted with hinged steel covers in good order.
No funnel coaming. Engine room skylight of steel with hinged covers in good order. ✓

Particulars of Flush Bunker Scuttles :—

None.

Particulars of Companionways :—

None ✓

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :— 7 de :- 1 @ $9\frac{3}{4}$ " dia $\times 36\frac{1}{2}$ " $\times \frac{3}{8}$ "; 8 @ 6" dia $\times 36\frac{1}{2}$ " $\times \frac{1}{4}$ "

4. Fire deck: 2 @ 15" dia x 36" x 5/16"; Pump Room 1 @ 9 3/4" x 36" x 3/8"

After deck :- Pump room 2 @ 18" dia x 36" x $\frac{3}{8}$ "

Pool: 25 @ 6" x 29" x 1/4" ; 1 @ 11 1/2" dia x 35" x 5/16"

(Wood plays + causes cars to rattle) ~~covered~~ ^{covered} ^{provided}


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

air pipes fitted with substantial steel goose-necks, (wood plugs ~~to fix~~)

Wood plugs or wire gauge
provided

Particulars of Gangway Cargo and Coaling Ports:—

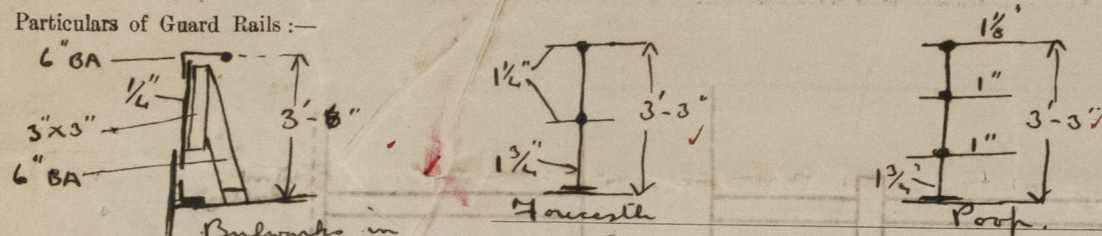
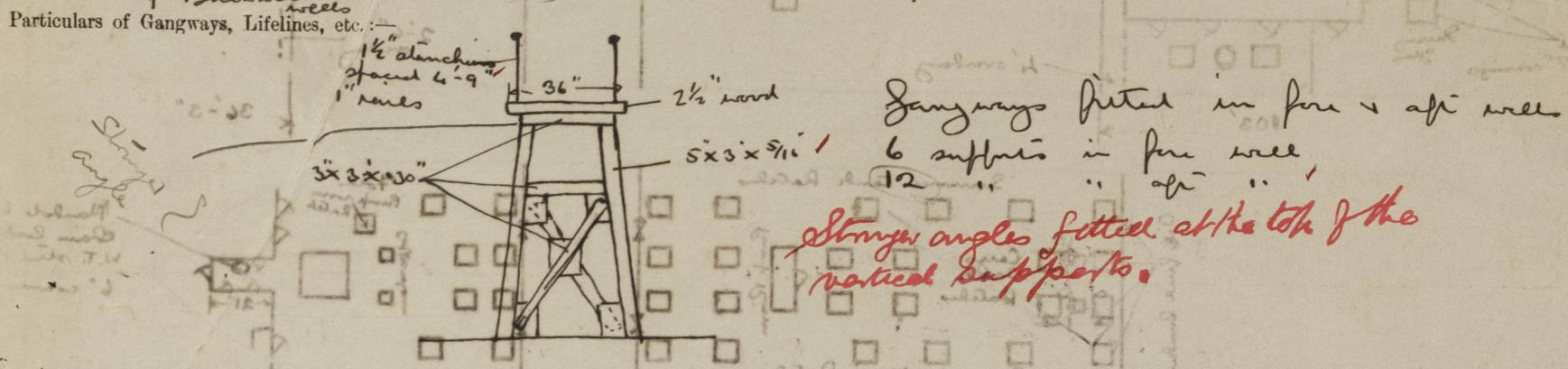
Name: 1

Particulars of Scuppers and Sanitary Discharge Pipes:— 2 scuppers each side forehatch; 3 each side aft deck; 2 each side fore deck discharging over ship's side. 
Silt pipes:— Fore 3 ft. 1 ss.
Bridge 2 each side above main deck
Aft 1 ss.
All silt pipes fitted with storm valves.

Particulars of Side Scuttles :—

21 side scutes on foot, 8 in precestr, all fitted with deadlocks.

Particulars of Guard Rails :—

Particulars of Gangways, Lifelines, etc. ^{weels}

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	126 120	3'-6"	36" x 21" 110 1/4 sq ft	5	26.25 sq ft	110.25 sq ft 26 sq ft
Forward Well	74'-9"	3'-6"	36" x 21" 65 1/2 sq ft	3	15.75 sq ft	65.53 15 sq ft

State position of each freeing port After Well: — 14'-3", 38'-3", 68'-3", 99', 122' } Distance from
(F. and A. position and height above deck edge) Forward Well: — 8', 32'-6", 56'-9" } Ship's bulwarks
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — 2 bars 7/8" dia. each } Openings 11" above deck edge

Additional area where sheer is less than standard.

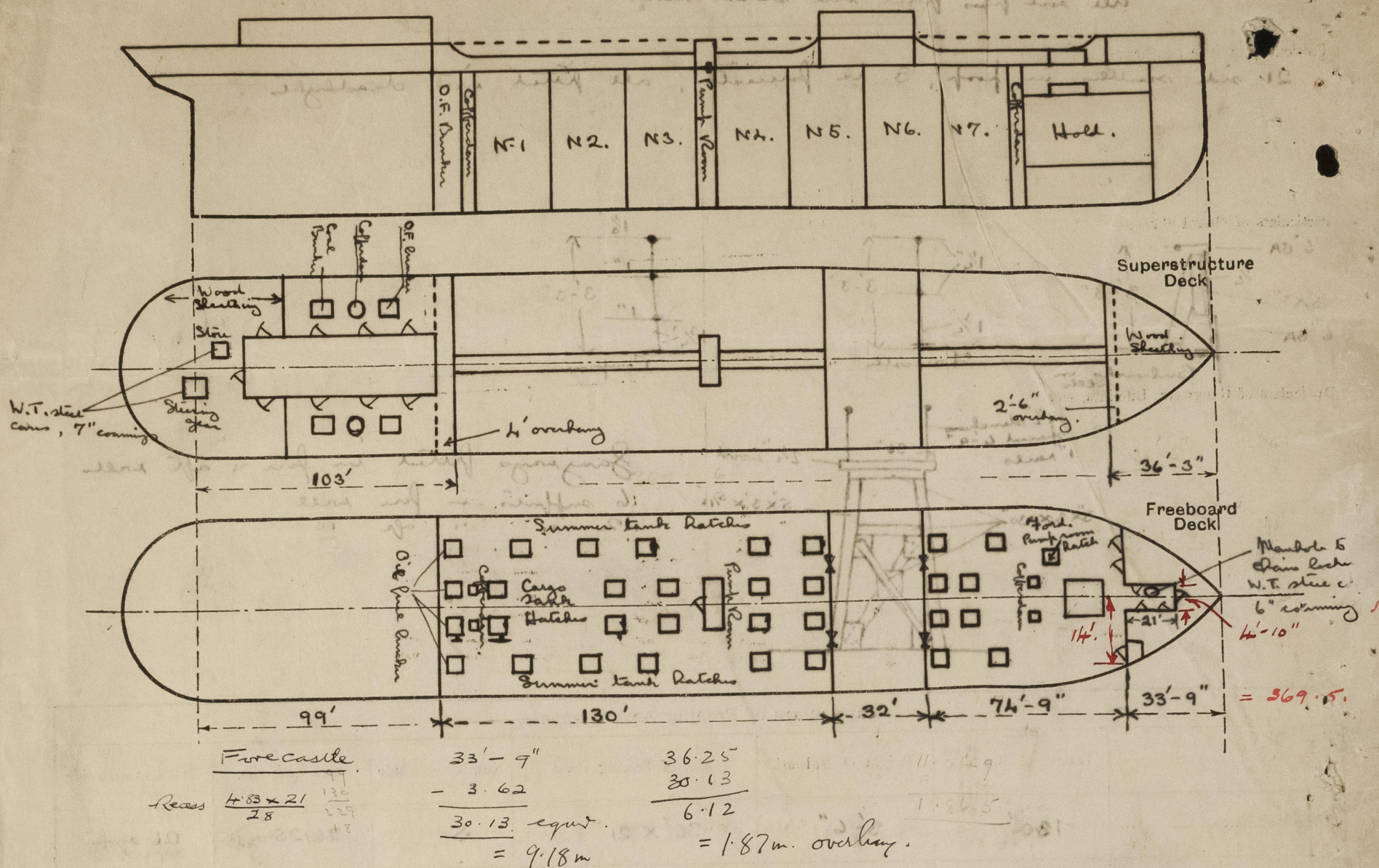
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	7/16" ✓	7/16" ✓	9" B.A.	30"	B.T.B.	None	✓	7'-6"
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	1/4" ✓	1/4" ✓	3 1/2 x 2 1/4 x 5/16"	27"	None	5'-4'	18"	7'-6"
Bridge, Forward Bulkhead	7/16" ✓	7/16"	7 x 3 1/2 x 7/16"	30"	B.T.B.	5' x 2'	18"	7'-6"
Forecastle Bulkhead	1/4" ✓	1/4"	5 x 2 1/2 x 5/16"	30"	None	4'-9" x 2'	19"	7'-6"
Trunk, Aft <i>Pump room casing</i> ...	5/16"	5/16"	4' x 3" x 3/8"	34"	"	4'-9" x 2'	18"	7'-6"
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Superstructure Decks	1/2"	5/16"	3" x 2 1/2" x 1/2"	24"	B.T.	4'-9" x 2'	18"	7'-3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓							
Deckhouses on Flush Deck Ships ...	✓							

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

Poop Bulkhead	✓	2 openings closed by 2 1/2" stern boards free height in roated channels 08 ft
Raised Quarter Deck Bulkhead	✓	2 " " " ringed steel W.T. doors, 8 fastenings mainbulkhead both sides (these joining to beams)
Bridge, After Bulkhead	✓	3 ringed steel doors into locks. Open alleyway in centre 4'-10" wide
Bridge, Forward Bulkhead	✓	2 ringed steel doors each side, (locks to remain) X
Forecastle Bulkhead	✓	1 ringed steel door (locks to remain) X
Exposed Machinery Casings on Fore-board or Raised Quarter Decks ...	✓	1 ringed steel door (locks to remain) X
Exposed Machinery Casings on Super-structure Decks	✓	1 ringed steel door (locks to remain) X
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	1 ringed steel door (locks to remain) X
Pump Room		
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:—



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

Survey held apart with vessel discharging alongside oil wharf
Not able to check shears
No part of special survey was carried out at this time, stated
vessel will be laid off on return to Bilbao and S.S. commenced.

"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."
"J.P."	"81"	"5' x 2'	"O.T.B."	"08"	"A.B." P	"J.P."	"J.P."

Builder's name and yard number... Armstrong Whitworth & Co. Ltd. Newcastle

Names of sister ships...

Owners... Cia. Arrendataria del Monopolio de Petroleros S.A.

Fee £5. 803.00

Received by me

Enacted 17th 3
Date for 242.00
of the register



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