

No. 1751

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. *1625* No. in Register Book *2877*

*Pahagayo*

S.S. "ULMARRA"

Makers of Engines *David Rowan & Co. Ltd.*

Works No. *464*

Makers of Main Boilers *do.*

Works No. *do.*

Makers of Donkey Boiler

Works No.

MACHINERY.



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004982-004997-0128



No.

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 1625 No. in Register Book 2877

Received at Head Office

6<sup>th</sup> March 1923

Surveyor's Report on the New Engines, Boilers, and Auxiliary  
Machinery of the <sup>Single Triple</sup> ~~Chain Quadruple~~ Screw Steamer

"Ulmarra"

Official No.

Port of Registry

Registered Owners

North Coast Steam Navigation  
Co. Ltd., Sydney.

Engines Built by

David Rowan & Co. Ltd.

at

Glasgow.

Main Boilers Built by

do.

at

do.

Donkey " "

at

Date of Completion

First Visit

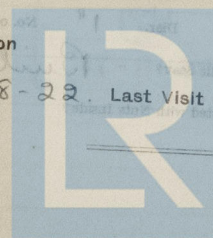
7-8-22

Last Visit

14-2-23

Total Visits

43



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## RECIPROCATING ENGINES.

Works No. 464 No. of Sets 1 Description Triple expansion, vertical.

No. of Cylinders each Engine 3 No. of Cranks 3  
 Diars. of Cylinders 14", 28½" and 44" Stroke 30"  
 Cubic feet in each L.P. Cylinder 30.1

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cyl.? No. H.P. top & bottom; rest Bottoms only.  
 " " " each Receiver? No. M.P. & L.P. bottoms.

Type of H.P. Valves,

" ~~Slide~~

" ~~and I.P.~~ →

" L.P. "

" Valve Gear

" Condenser

Diameter of Piston Rods (plain part)

Material

Diar. of Connecting Rods (smallest part)

" Crosshead Gudgeons

No. of Crosshead Bolts (each) 2 Diar. over Thrd. 2½" Thrds. per inch 4 Material Steel.

" Crank Pin " " 2 " 2½" " 4 " Steel.

" Main Bearings 6 Lengths All 8¾"

" Bolts in each 2 Diar. over Thread 2" Threads per inch 4½ Material Steel.

" Holding Down Bolts, each Engine 76 Diar. 1" No. of Metal Chocks 76

Are the Engines bolted to the Tank Top or to a Built Seat?

Are the Bolts tapped through the Tank Top and fitted with Nuts Inside?

If not, how are they fitted?

Piston

Single ported D slide

Double

Stephenson link

Surface

Cooling Surface 1300 sq. ft.

Screw part (bottom of thread) 3.105"

(3.18")

I.S.

Material I.S.

Length of Bearing 4½" Material Steel.

Thrds. per inch 4 Material Steel.

" 4 " Steel.

All 8¾"

4½ Material Steel.

1" No. of Metal Chocks 76

Built Seat.

✓

✓

Connecting Rods, Forged by

Piston " "

Crossheads,

Connecting Rods, Finished by

Piston " "

Crossheads,

Date of Harbour Trial

" Trial Trip

Trials run at

Were the Engines tested to full power under Sea-going conditions?

If so, what was the L.H.P.?

Pressure in 1st I.P. Receiver, 170 lbs., 2nd I.P., 70 lbs., L.P., 40½ lbs., Vacuum, 27½ ins.

Speed on Trial

If the Conditions on Trial were such that full power records were not obtained give the following estimated

data:—

Builders' estimated L.H.P.

Estimated Speed

Revs. per min. 105

H.P. cylinder tested @ 270 lbs/□ hydraulic.

B.C.

No. 4216

VW  
H

17-11-22.

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## TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

No. of Motors driving Propeller Shafting

Are the Propeller Shafts driven direct by the Motors or through Gearing?

Is Single or Double Reduction Gear employed?

Description of Motors

Diam. of 1st Reduction Pinion	}	Width	Pitch of Teeth
" 1st " Wheel			
Estimated Pressure per lineal inch			
Diam. of 2nd Reduction Pinion	}	Width	Pitch of Teeth
" 2nd " Wheel			
Estimated Pressure per lineal inch			

Revs. per min. of Generators at Full Power

" Motors "
" 1st Reduction Shaft "
" 2nd " "
" Propellers at Full Power "

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

Speed on Trial	Knots.	Propeller Revs. per min.	S.H.P.
----------------	--------	--------------------------	--------

## Makers of Turbines

Generators

Motors

Reduction Gear

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

## DESCRIPTION OF INSTALLATION.

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# SHAFTING.

Are the Crank Shafts Built or Solid?

*Built*

No. of Lengths in each

*1*

Angle of Cranks

*120°*

Diar. by Rule

*8.645"*

Actual

*8.45"*

In Way of Webs

*9"*

" of Crank Pins

*8.45"*

Length between Webs

*8.45"*

Greatest Width of Crank Webs

*16 3/4"*

Thickness

*5 1/2"*

Least

"

"

*12 3/8"*

"

"

Diar. of Keys in Crank Webs

*1 1/2" x 7/8"*

Length

*2 1/2"*

" Dowels in Crank Pins

*1"*

Length

*2 1/2"*

Screwed or Plain

*Plain*

No. of Bolts each Coupling

*6*

Diar. at Mid Length

*2'*

Diar. of Pitch Circle

*1'-2 1/2"*

Greatest Distance from Edge of Main Bearing to Crank Web

*1/4"*

Crank pin bushes; - *John M. Henderson & Co., Aberdeen.*

Type of Thrust Blocks

*Home-shoe.*

No.

"

Rings

*5*

Diar. of Thrust Shafts at bottom of Collars

*9"*

No. of Collars

*5*

"

"

Forward Coupling

*8 3/4"*

At Aft Coupling

*8 1/4"*

Diar. of Intermediate Shafting by Rule

*8.24"*

Actual

*8.25"*

No. of Lengths

*2*

No. of Bolts, each Coupling

*6*

Diar. at Mid Length

*2"*

Diar. of Pitch Circle

*1'-2 1/2"*

Diar. of Propeller Shafts by Rule

*9.34"*

Actual

*9.5"*

At Couplings

*8 3/4"*

Are Propeller Shafts fitted with Continuous Brass Liners?

*Yes.*

Diar. over Liners

*10 5/8"*

Length of After Bearings

*3'-2"*

Of what Material are the After Bearings composed?

*Lignum vitae staves.*

Are Means provided for lubricating the After Bearings with Oil?

*No.*

"

"

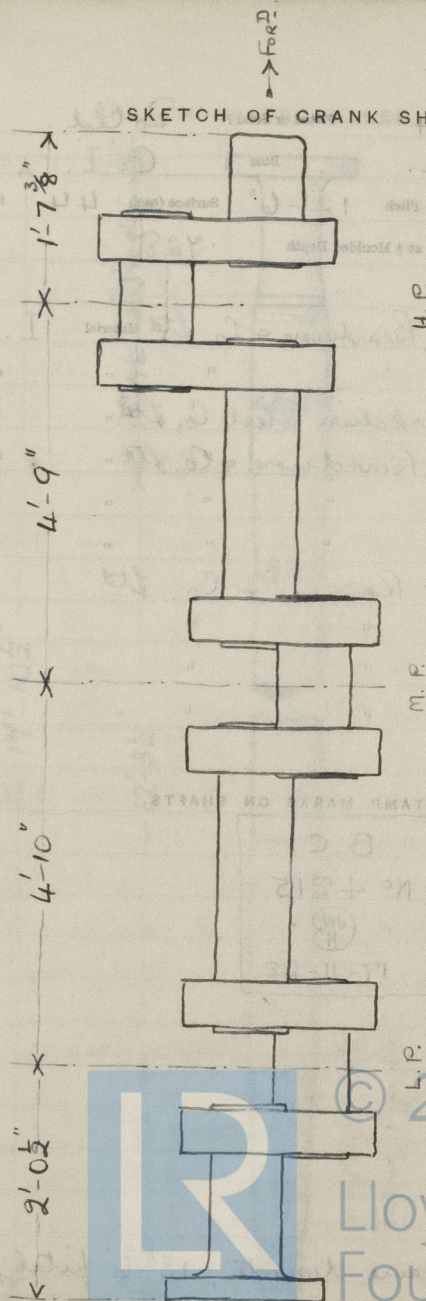
to prevent Sea Water entering the Stern Tubes?

*Yes.*

If so, what Type is adopted?

*Water supplied from Sanitary tank, flowing out astern.*

## SKETCH OF CRANK SHAFT.



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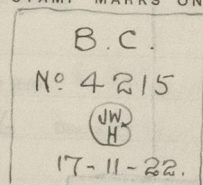
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No. of Blades each Propeller 4 Fitted or Solid? Solid  
 Material of Blades C. I. Boss C. I.  
 \*Diam. of Propellers 10'-6" Pitch 12'-6" Surface (each 44 S. ft.  
 Coefficient of Displacement of Vessel at  $\frac{1}{2}$  Moulded Depth .428

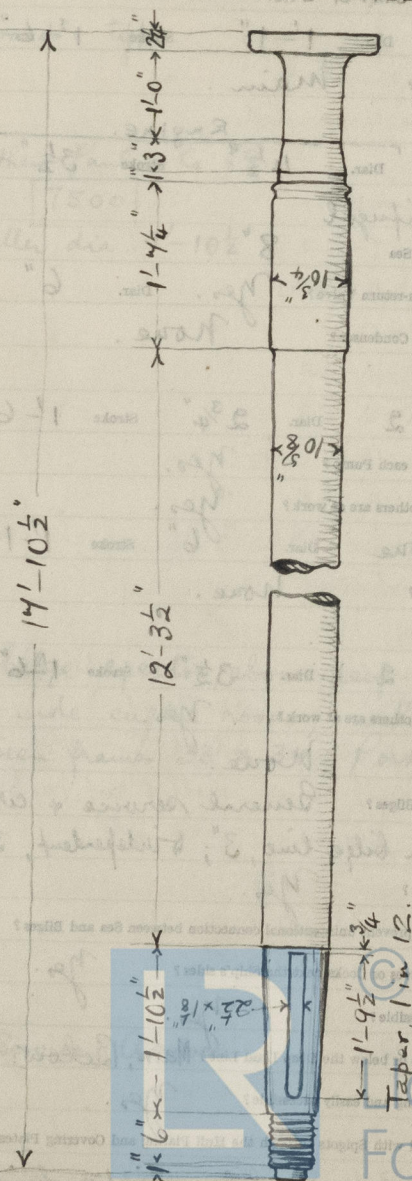
Crank Shafts Forged by Wm Beardmore & Co. Ltd. Material I. S.  
 " Pins " " " " "  
 " Webs " Lanarkshire Steel Co. Ltd. " "  
 Thrust Shafts " Wm Beardmore & Co. Ltd. " "  
 Intermed. " " " " "  
 Propeller " " " " "  
 Crank " Finished by D. Rowan & Co. Ltd.  
 Thrust " " " " "  
 Intermed. " " " " "  
 Propeller " " " " "

## STAMP MARKS ON SHAFTS.



\* Spare propeller same diameter, 13'-6" pitch, same area, same material.

## SKETCH OF PROPELLER SHAFT.



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## PUMPS, ETC.

No. of Air Pumps *One*      Diar. *1'-1"*      Stroke *1'-6"*  
 Worked by Main or Independent Engines? *Main*  
 No. of Circulating Pumps *1*      Diar. *4 1/2"*      Stroke *3 1/2"*  
 Type of " *Centrifugal*  
 Diar. of " *Suction from Sea*      *8"*  
 Has each Pump a Bilge Suction with Non-return Valve? *Yes.*      Diar. *6"*  
 What other Pumps can circulate through Condenser? *None.*  
 No. of Feed Pumps on Main Engine *2*      Diar. *2 3/4"*      Stroke *1'-6"*  
 Are Spring-loaded Relief Valves fitted to each Pump? *Yes.*  
 Can one Pump be overhauled while the others are at work? *Yes.*  
 No. of Independent Feed Pumps *One*      Diar. *6"*      Stroke *1'-1"*  
 What other Pumps can feed the Boilers? *None.*  
 No. of Bilge Pumps on Main Engine *2*      Diar. *3 1/2"*      Stroke *1'-6"*  
 Can one Pump be overhauled while the others are at work? *Yes.*  
 No. of Independent Bilge Pumps *None.*  
 What other Pumps can draw from the Bilges? *General service & circulating.*  
*(Gen. service to main bilge line, 3"; independent, 3".)*  
 Are all Bilge Suctions fitted with Roses? *Yes.*  
 Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges? *Yes.*  
 Are all Sea Connections made with Valves or Cocks next the Ship's sides? *Yes.*  
 Are they placed so as to be easily accessible? *Yes.*  
 Are the Discharge Chests placed above or below the Deep Load Line? *Main, Below: Bilge &*  
 Are they fitted direct to the Hull Plating and easily accessible? *Yes.*  
 Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges on the Outside? *Yes, + bilge ejector, boiler blow-*

## BOILERS

Edward's type.

Matthew Paul &amp; Co. Ltd.

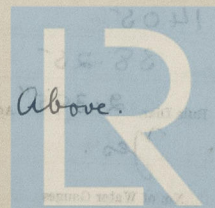
7500

Impeller dia. *1'-10 1/2"*

*1 1/2' bilge ejector, above deep load line, after end  
 Port side engine room, with direct suction  
 between frames 33 & 34, Port side.*

General Service, Above.

down, and firemen's ash cock.



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## BOILERS.

Works No. 464

No. of Boilers 2 Type Scotch.

Single or Double-ended Single-ended.

No. of Furnaces in each 2

Type of Furnaces Morrison.

Date when Plan approved 20-4-22.

Approved Working Pressure 180 lb/□"

Hydraulic Test Pressure 320 "

Date of Hydraulic Test 17-11-22.

" when Safety Valves set 2-2-23

Pressure at which Valves were set 185 lb/□"

Date of Accumulation Test 2-2-23.

Maximum Pressure under Accumulation Test 186 lb/□"

System of Draught Natural.

Can Boilers be worked separately? Yes.

Makers of Plates Jas. Dunlop & Co. Ltd., Calderbank.  
(Shell plates by Steel Co. of Scotland.)

" Stay Bars Lanarkshire Steel Co. Ltd.

" Rivets North-West Rivet, Bolt & Nut Factory Ltd.

" Furnaces John Marshall & Co. Ltd.

Greatest Internal Diam. of Boilers 12'-4 $\frac{3}{4}$ "

" " Length " 11'-0"

Square Feet of Heating Surface each Boiler 1405

" " Grate " " 38.25

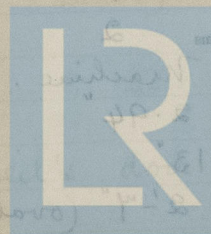
No. of Safety Valves each Boiler 2 Rule Diam. 2.395" Actual 2 $\frac{1}{2}$ "

Are the Safety Valves fitted with Easing Gear? Yes.

No. of Pressure Gauges, each Boiler 1 No. of Water Gauges 1

" Test Cocks " 3 (1 set) Salinometer Cocks 1

circulating pump slow - other aux's stopped. Lost  
(Coal.) 4 $\frac{3}{4}$ " water. Closed at 183 lb/□".



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Thickness of End Plates in Steam Space Approved  $1\frac{1}{32}$ "

" " " " in Boilers "

Pitch of Steam Space Stays  $18" \times 13\frac{3}{4}"$  (sides)  $16\frac{1}{2}" \times 16\frac{1}{2}"$  (centre)

Diar. " " " " Approved  $2\frac{1}{2}"$  Threads per Inch 6

" " " " in Boilers "

Material of " " " S.M. steel.

How are Stays Secured? nuts inside & outside.

Diar. and Thickness of Loose Washers on End Plates (none)

" " Riveted " " "

Width " " Doubling Strips "

Thickness of Middle Back End Plates Approved  $1\frac{1}{4}"$   $\frac{3}{4}"$

" " " " in Boilers "

Thickness of Doublings in Wide Spaces between Fireboxes (none)

Pitch of Stays at " " " "  $13\frac{1}{4}" \times 8"$

Diar. of Stays Approved  $1\frac{3}{4}"$   $\frac{1}{2}"$  Threads per Inch 10

" " in Boilers "

Material " S.M. steel.

Are Stays fitted with Nuts outside? yes, except those immediately beneath lap joint, which project  $\frac{3}{8}"$  & are caulked.

Thickness of Back End Plates at Bottom Approved  $\frac{3}{4}"$

" " " " in Boilers "

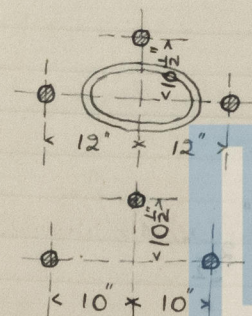
Pitch of Stays at Wide Spaces between Fireboxes (see opposite.) ->

Thickness of Doublings in " " (none)

Thickness of Front End Plates at Bottom Approved  $1\frac{1}{4}"$   $\frac{1}{8}"$

" " " " in Boilers "

No. of Longitudinal Stays in Spaces between Furnaces 3



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2" and 2 1/4"

Diar. of Stays Approved

~~7/16~~

Threads per Inch

6

" " in Boilers

"

Material

S.M. steel.

Thickness of Front Tube Plates Approved

~~3/4~~ 7/8"

" " " in Boilers

"

Pitch of Stay Tubes at Spaces between Stacks of Tubes

14" x 8 3/4"

Thickness of Doublings in

" " "

(none.)

" Stay Tubes at

" " "

5/16"

Are Stay Tubes fitted with Nuts at Front End?

no yes.

Thickness of Back Tube Plates Approved

~~23/64~~ 23/32"

" " " in Boilers

"

Pitch of Stay Tubes in Back Tube Plates

11 1/4" x 8 3/4"

" Plain "

4 1/2" x 4 3/8"

Thickness of Stay Tubes

1/4" in nests, 5/16" marginal, 3/8" top corner.

" Plain "

9 w.g.

External Diar. of Tubes

3 1/4"

Material

Lap - w'd iron.

Thickness of Furnace Plates Approved

17/32"

" " " in Boilers

"

Smallest outside Diar. of Furnaces

3'-6 13/16"

Length between Tube Plates

4'-0"

Width of Combustion Chambers (Front to Back)

2'-11 21/32"

Thickness of " " Tops Approved

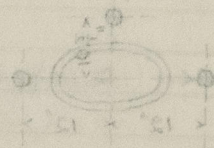
~~21/64~~ 21/32"

" " " in Boilers

" 01 x 01 "

Pitch of Screwed Stays in C.C. Tops

9 3/8" x 8 5/8"



Makers of tubes -  
The Scottish Tube Co. Ltd.



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10

S. M. steel.

3/22/11

 $9\frac{1}{2}'' \times 8\frac{5}{8}''$ 

Threads per Inch 10

S. M. Steel.

$$\frac{32}{64} = \frac{1}{2} \quad \frac{5}{8}$$
$$8^{\frac{4}{8}} \times 8^{\frac{1}{8}}$$

Threads per Inch | 10

S. M. Steel.

yes.  
3 3/4"

### Thickness of Combustion Chamber Bottoms

5

(no centre chamber.)

9" x  $\frac{7}{8}$ " (double.)

S. M. Steel.

3

190

16" x 12"

23

8. SUPPLEMENTARY

[illegible]

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Mr. Neil's door



## VERTICAL DONKEY BOILERS.

No. of Boilers	Type	
Greatest Int. Diar.	Height	
Height of Boiler Crown above Fire Grate		
Are Boiler Crowns Flat or Dished?		
Internal Radius of Dished Ends	Thickness of Plates	
Description of Seams in Boiler Crowns		
Diar. of Rivet Holes	Pitch	Width of Overlap
Height of Firebox Crowns above Fire Grate		
Are Firebox Crowns Flat or Dished?		
External Radius of Dished Crowns	Thickness of Plates	
No. of Crown Stays	Diar.	Material
External Diar. of Firebox at Top	Bottom	Thickness of Plates
No. of Water Tubes	Ext. Diar.	Thickness
Material of Water Tubes		
Size of Manhole in Shell		
Dimensions of Compensating Ring		
Heating Surface, each Boiler	Grate Surface	

## SUPERHEATERS.

Description of Superheaters	
Where situated?	
Which Boilers are connected to Superheaters?	
Can Superheaters be shut off while Boilers are working?	
No. of Safety Valves on each Superheater	Diar.
Are " " fitted with Easing Gear?	
Date of Hydraulic Test	Test Pressure
Date when Safety Valves set	Pressure on Valves

## MAIN STEAM PIPES

No. of Pipes	
Material	
Radius, Width of Seams	
Internal Diar.	
Thickness	
How are Flanges secured?	
Date of Hydraulic Test	
Test Pressure	
No. of Pipes	
Material	
Radius, Width of Seams	
Internal Diar.	
Thickness	
How are Flanges secured?	
Date of Hydraulic Test	
Test Pressure	



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## MAIN STEAM PIPES.

No. of Lengths  
Material  
Brazed, Welded or Seamless  
Internal Diam.  
Thickness  
How are Flanges secured?  
Date of Hydraulic Test  
Test Pressure

2  
Steel,  
lap welded.  
4"  
 $\frac{1}{4}$ "  
Sd & expanded.  
26/1/23  
540 lb/sq

No. of Lengths  
Material  
Brazed, Welded or Seamless  
Internal Diam.  
Thickness  
How are Flanges secured?  
Date of Hydraulic Test  
Test Pressure

All auxiliary steam pipes of  
S.D. Copper.

No. of Lengths  
Material  
Brazed, Welded or Seamless  
Internal Diam.  
Thickness  
How are Flanges secured?  
Date of Hydraulic Test  
Test Pressure

Stewarts & Lloyds, Ltd. finished by D.R. & Co.

made of boiler plate.)

FEED WATER HEATERS

FEED WATER FILTERS

STEERING GEAR

3082

307323 A



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## EVAPORATORS.

3346

No. 1 Type Vertical Merchant Service Tons per Day 6  
 Makers Davie & Horne, Ltd. Johnstone.  
 Working Pressure 25 lb/sq Test Pressure 50 lb/sq Date of Test 1-11-22  
 Date of Test of Safety Valves under Steam

## FEED WATER HEATERS.

No. 1 Type Direct contact  
 Makers G. & J. Weir, Ltd.  
 Working Pressure 20 lb/sq Test Pressure 40 lb/sq Date of Test 4-12-22.

## FEED WATER FILTERS.

No. 1 Type Suction (tank) Size ✓  
 Makers D. Rowan & Co. Ltd.  
 Working Pressure Atmos. Test Pressure Date of Test—

## STEERING GEAR.

MacGregor's Pat. Glasgow Eng. Works, Ltd.

## ASH EJECTOR.

3059

Treweek & Proctor's patent, by Mechanics Ltd.

## LIST OF DONKEY PUMPS.

F.W. pump, 12020, 4" x 3" x 5", Thom, Lamont & Co. Ltd.  
 Ballast pump, 12022, 4½" x 4½" x 8", Same makers.  
 Sanitary, 12021, 4" x 3" x 5", " "  
 Independent feed pump, 41123, G. & J. Weir, Ltd.  
 Molasses pump, 41125, same makers.



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## SPARE GEARS

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	6
" Coupling Bolts	6	" Main Bearing Bolts	2	" Valve Chest "	6
" Junk Ring <sup>Studs</sup> Bolts	6	" Feed Pump Valves	2	" Bilge Pump Valves	2
" H.P. Piston Rings	✓	" I.P. Piston Rings	✓	" L.P. Piston Rings	✓
" " Springs	✓	" " Springs	✓	" " Springs	✓
" Safety Valve "	1	" Fire Bats 1 set for 1 furnace.		Feed Check Valves	✓
" Piston Rods	✓	" Connecting Rods	✓	" Valve Spindles	✓
" Air Pump Rods	✓	" Air Pump Buckets	✓	" Air Pump Valves	✓
" Cir. "	✓	" Cir. "	✓	" Cir. "	✓
" Crank Shafts	✓	" Crank Pin Bushes 1 (in halves)		Crosshead Bushes	✓
" Propeller Shafts	1	" Propellers	1	" Propeller Blades	✓
" Boiler Tubes	12	" Condenser Tubes	25	" Condenser Ferrules	50

## OTHER ARTICLES OF SPARE GEAR:—

- 1 H.P. piston valve
- 2 valves for aux. feed pump, (Weir's).
- 2 " " general service "
- 36 assorted bolts + nuts.
- 3 round iron bars, various.
- 3 flat " " "
- 12 steel studs + nuts, assorted.
- Sundry iron plates.

## REFRIGERATORS

Lockwood & Carlisle in HP & MP.

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## REFRIGERATORS.

591 Type E.s.

No. of Machines

Capacity of each

Makers

L. Sterne &amp; Co. Ltd. Glasgow.

Description

Two cylinder vertical 4"x6" compressor, direct-coupled to shop number. Single cyl. vertical steam engine by E. 4313 same makers.

No. of Steam Cylinders, each Machine

No. of Compressors

Comp. No. of Cranks

Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently.

Certificate, dated 24/1/23, at Crown Iron Works, from makers, of hydraulic tests — all cast iron parts to 300 lb/sq. in., all wrought iron & steel parts to 1000 lb/sq. in.; also certifying that these parts were found absolutely tight under these pressures.

System of Refrigeration

Ammonia, direct expansion.

Insulation

Insulated cork.

Are Brine and other Regulating Valves placed so as to be accessible without entering the Insulated Spaces?

(none.)

Are all Pipes, Air Trunks, &amp;c., well secured and protected from risk of damage?

Yes.

Are all Bilge, Sounding, and Air Pipes in Insulated Spaces properly insulated?

"

Are Thermometer Tubes so arranged that Water cannot enter and freeze in them?

"

Date of Test under Working Conditions

6/2/23.

Air-test of pipes, condenser, &amp; connections, 3/2/23.

(Spare gear, cont'd) Assorted lengths & bends of piping, flanges, couplings, & screwing appliances; a supply of assorted bolts, nuts, studs, packings, joint rings, comp. rings.

## RESULTS OF TRIALS.

COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after 2 hours.
Butter Room.	48°F.	19°F.	14 hours.	3.5°F.
Spare liquid, 100 lbs. (2 drums.)				
" Thermometers, 3.				

Articles of Spare Gear for Refrigerating Plant carried on board:—

1 Crankshaft for eng.; do. for Compressor; 1 Comp. cover; 1 piston & rod with nuts complete for engine; do. for Comp.; 1 piston valve spindle & nuts for eng.; 1 top & 1 bottom half main bearing bush; 2 m. b. studs; 1 set piston & conn. rod bolts & bushes; 1 ecc. strap & rod; 1 piston valve for eng.; 1 set comp. suction & delivery valves with springs & bones; 1 of each pattern Ammonia valve, flange, & fittings; 1 of each kind of press. gauge; (Cont.)



Driven by direct-coupled single-cylinder  
steam engine **S.C. 3½** by W. Sisson & Co. Ltd  
Gloucester.

## ELECTRIC LIGHTING.

Installation Fitted by *Telford, Grier, & Mackay, Ltd.*  
No. and Description of Dynamos *One, 6 KW. Comp. open protected.* **52493**  
Makers of Dynamos *(above)*  
Capacity " *60* Amperes, at *100* Volts, *600* Revols. per Min.  
Current Alternating or Continuous *Continuous.*  
Single or Double Wire System *double.*  
Position of Dynamos *Bottom platform, Starboard side.*  
" Main Switch Board *at dynamo.*  
No. of Circuits to which Switches are provided on Main Switch Board *Six.*  
Particulars of these Circuits:—

Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
Shore conn. fore-			18	7.052	1240	100%	600 meg.
do. aft.			"	"	"	"	"
engine room.	30	16	15	"	1040	"	"
navigation.	10	various.	4	7.036	1000	"	"
Bridge.	27	{ 16 c.p. and 30 watt.	12	7.044	1200	"	"
midship.	24	16	"	"	"	"	"

Total No. of Lights *\* 110* No. of Motors driving Fans, &c. *None.* No. of Heaters *None.*

Current required for Motors and Heaters *None.*

*\* allowing 19 for shore connections.*

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Positions of Auxiliary Switch Boards, with No. of Switches on each

None.

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

On Aux.                "                "                each Auxiliary Circuit

Wherever a Cable is reduced in size

To each Lamp Circuit

To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted

Are the Fuses of Standard Sizes ?

Are all Switches and Cut-outs constructed of Non-inflammable Material?

Are they placed so as to be always and easily accessible?

Smallest Single Wire used, No. 16 S.W.G., Largest, No. 16 S.W.G.

How are Conductors in Engine and Boiler Spaces protected?	Armoured & braided.
" Saloons, State Rooms, &c., " ?	Lead-covered.

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

(2) „ passing through Bunkers or Cargo Spaces

(3)                   "                   "                   Deck Beams or Bulkheads

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? *no joints*

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces?

Are all Hull Connections for Single-Wire Systems made with Screws of large Surface? ☐ Yes ☐ No

Are the Dynamos, Motors, Main and Branch Cables, so placed that the Compasses are not injuriously affected by them?

Have Tests been made to prove that this condition has been satisfactorily fulfilled?

Has the Insulation Resistance over the whole system been tested?

What does the Resistance amount to?

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter?

Date of Trial of complete Installation 9/2/23. Duration of Trial 6 hours.

Have all the requirements of Section 42 been satisfactorily carried out?

LLOYD'S REDUCTION

Survey and History of Shipping.



## GENERAL CONSTRUCTION.

Have the Machinery and Boilers been constructed in accordance with the requirements of the Rules and the

Approved Plans? *Yes.*

If not, give details of the points of difference, and state when these were sanctioned by the Chief

Surveyor.

Fees—

## MAIN BOILERS.

		£	s.	d.
H.S.	2810	Sq. ft.	16	17 : 2½
G.S.	"	"	:	:

## DONKEY BOILERS.

H.S.	✓	Sq. ft.	:	:
G.S.	✓	"	:	:
		£	:	:

## ENGINES.

L.P.C.	30.1	Cub. ft.	25	:	1	:
		£	:	:		
Testing, &c. ...		:	:			
		£	:	:		
Expenses ...		:	:			
Total ...		£	:	:		

It is submitted that this Report be approved,

*W. H. King*  
Chief Surveyor.

Approved by the Committee for the Class of M.B.S.\* on the *25<sup>th</sup> July 1923*

Fees advised

Fees paid

*In order of*

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*J. Wood Harrington.*  
Engineer Surveyor to the British Corporation for the  
Survey and Registry of Shipping.



## GENERAL INFORMATION

Page 1

1. Name of the person or organization making the report: *John Doe*

2. Date of the report: *10/1/2019*

3. Name of the person or organization being reported on: *ABC Company*

4. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

5. Name of the person or organization making the report: *John Doe*

6. Date of the report: *10/1/2019*

7. Name of the person or organization being reported on: *ABC Company*

8. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

9. Name of the person or organization making the report: *John Doe*

10. Date of the report: *10/1/2019*

11. Name of the person or organization being reported on: *ABC Company*

12. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

13. Name of the person or organization making the report: *John Doe*

14. Date of the report: *10/1/2019*

15. Name of the person or organization being reported on: *ABC Company*

16. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

17. Name of the person or organization making the report: *John Doe*

18. Date of the report: *10/1/2019*

19. Name of the person or organization being reported on: *ABC Company*

20. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

21. Name of the person or organization making the report: *John Doe*

22. Date of the report: *10/1/2019*

23. Name of the person or organization being reported on: *ABC Company*

24. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

25. Name of the person or organization making the report: *John Doe*

26. Date of the report: *10/1/2019*

27. Name of the person or organization being reported on: *ABC Company*

28. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*

29. Name of the person or organization making the report: *John Doe*

30. Date of the report: *10/1/2019*

31. Name of the person or organization being reported on: *ABC Company*

32. Address of the person or organization being reported on: *123 Main St, New York, NY 10001*



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Visits

4-8-22.  
 23-8-22.  
 25-8-22.  
 8-9-22.  
 13-9-22.  
 26-9-22.  
 5-10-22.  
 18-10-22.  
 23-10-22.  
 26-10-22.  
 3-11-22. (W. Macfarlane)  
 6-11-22.  
 13-11-22.  
 17-11-22.  
 22-11-22.  
 23-11-22. (W. Luke)  
 28-11-22 "  
 29-11-22  
 5-12-22 (W. Greig.)  
 7-12-22 (W. Macfarlane, at Weir's)  
 12-12-22  
 19-12-22. 21-12-22 (Sterne & Co.)  
 25-12-22. 18-1-23 "2020"  
 26-12-22.  
 29-12-22.  
 11-1-23 (Ship)  
 18-1-23 "  
 22-1-23 "



23-1-23 (ship.)  
 25-1-23 "  
 26-1-23 "  
 29-1-23 "  
 30-1-23 "  
 1-2-23 "  
 2-2-23 " (DOCK TRIAL)  
 3-2-23 " (refrig. air test)  
 5-2-23 "  
 6-2-23 " (refrig. insulation test)  
 9-2-23 " (TRIAL TRIP)  
 12-2-23 "  
 14-2-23 " (TRIAL TRIP.)



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