

No. 1995

LEEWANA

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1814 No. in Register Book 3120

S.S. "Bonaldi"

Makers of Engines David Rowan & Co. Ltd

Works No. 808

Makers of Main Boilers David Rowan & Co. Ltd

Works No. 808

Makers of Donkey Boiler (none)

Works No. —

MACHINERY.



© 2021

Lloyd's Register
Foundation

010866-010873-0002

No.

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. No. in Register Book

Received at Head Office

19th January 1925

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Triple~~ ~~Twin Quadruple~~ Screw Steamer

" Bonalbo "

Official No.

Port of Registry

SYDNEY.

Registered Owners

North Coast Steam Navigation Co.
Sydney, Australia.

Engines Built by

David Rowan & Co. Ltd.

at

Elliot St. Glasgow

Main Boilers Built by

(same.)

at

Donkey " "

(none.)

at

Date of Completion

13/1/25

First Visit

25/6/24

Last Visit

13/1/25

Total Visits 34

Lloyd's Register
Foundation

RECIPROCATING ENGINES.

Works No. **808** No. of Sets **1** Description **Triple expansion.**

No. of Cylinders each Engine **3** No. of Cranks **3**
 Diars. of Cylinders **17", 28½" and 47"** Stroke **30"**
 Cubic feet in each L.P. Cylinder **30.1**
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr? **Yes.**
 " " " each Receiver? **Only M.P. & L.P. ~~4~~ tops.**
 Type of H.P. Valves, **Piston**
 " 1st I.P., **Andrews & Cameron**
 " 2nd I.P., **D-P slide**
 " L.P., **Stevenson.**
 " Valve Gear **Surface.**
 " Condenser **Surface.** Cooling Surface **1300** sq. ft.
 Diameter of Piston Rods (plain part) **4¼"** Screwed part (bottom of thread) **3.1"**
 Material **I. S.**
 Diar. of Connecting Rods (smallest part) **4¼"** Material **I. S.**
 " Crosshead Gudgeons **5"** Length of Bearing **7½"** Material **Steel.**
 No. of Crosshead Bolts (each) **2** Diar. over Thrd. **2½"** Thrds. per inch **4** Material **Steel**
 " Crank Pin " **2** " **2½"** " **4** " **"**
 " Main Bearings **6** Lengths **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? **Tank Top.**
 Are the Bolts tapped through the Tank Top and fitted with Nuts Inside? **Yes.**
 If not, how are they fitted? **—**

Connecting Rods, Forged by **D. Rowan & Co. Ltd.**

Piston " " }

Crossheads, " " }

Connecting Rods, Finished by **D. Rowan & Co. Ltd.**

Piston " " }

Crossheads, " " }

Date of Harbour Trial **24/12/24.**" Trial Trip **8/1/25**Trials run at **Skelmorlie & Firth of Clyde.**Were the Engines tested to full power under Sea-going conditions? **Yes.**If so, what was the I.H.P.? **871**Revol. per min. **110**Pressure in 1st I.P. Receiver, **167** lbs., 2nd I.P., **66** lbs., L.P., **9** lbs., Vacuum, **25½** ins.Speed on Trial **10.78 Knots per hour**

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

data:—

Builders' estimated I.H.P. **900**

Revol. per min.

Estimated Speed

H.P. cyl. tested at 270 lbs/ft² hyd. 3/11/24.

© 2021

Lloyd's Register
Foundation

TURBINE ENGINES.

Works No. Type of Turbines
 No. of H.P. Turbines No. of I.P. No. of L.P. No. of Astern

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

Is Single or Double Reduction Gear employed?

Diam. of 1st Reduction Pinion

" 1st " Wheel

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion

" 2nd " Wheel

Estimated Pressure per lineal inch

Revs. per min. of H.P. Turbines at Full Power

S.H.P.

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

" " I.P. " "

" " L.P. " "

" " 1st Reduction Shaft

" " 2nd " "

" " Propeller Shaft

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

Speed on Trial

Knots. Propeller Revs. per min.

S.H.P.

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

DESCRIPTION OF INSTALLATION.

No. of Turbine Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

No. of Motors driving Propeller Shafts

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

" 1st " Wheel

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion

" 2nd " Wheel

Estimated Pressure per lineal inch

Revs. per min. of H.P. Turbines at Full Power

S.H.P.

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

" " I.P. " "

" " L.P. " "

" " 1st Reduction Shaft

" " 2nd " "

" " Propeller Shaft

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

Speed on Trial

Knots. Propeller Revs. per min.

S.H.P.



© 2021

Lloyd's Register
Foundation

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

Revol. 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 Revols. 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.

Diagram showing the arrangement of the propeller shafting and the location of the various components. The diagram includes the following details:

- Diagram of the propeller shafting, showing the location of the propeller shaft, the reduction gear shaft, and the generator shaft.
- Diagram of the propeller shafting, showing the location of the propeller shaft, the reduction gear shaft, and the generator shaft.
- Diagram of the propeller shafting, showing the location of the propeller shaft, the reduction gear shaft, and the generator shaft.

SHAFTING.

Are the Crank Shafts Built or Solid?

Built.

No. of Lengths in each

one

Angle of Cranks

120°

Diar. by Rule

8.68"

Actual

8 3/4"

In Way of Webs

9"

" of Crank Pins

8 3/4"

Length between Webs

8 3/4"

Greatest Width of Crank Webs

1'-4 3/4"

Thickness

5 1/2"

Least

" "

1'-0 3/8"

"

"

Diar. of Keys in Crank Webs

1 1/2" x 3/8"

Length

"

" 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"

Type of Thrust Blocks

Home-shoe

No.

" Rings

4

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

8.25

Actual

8 7/16"

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

9.245"

Actual

9 1/2"

At Couplings

8 3/4"

Are Propeller Shafts fitted with Continuous Brass Liners?

Yes.

Diar. over Liners

10 7/8"

Length of After Bearings

3'-2"

Of what Material are the After Bearings composed?

Lignum Vitae

Are Means provided for lubricating the After Bearings with Oil?

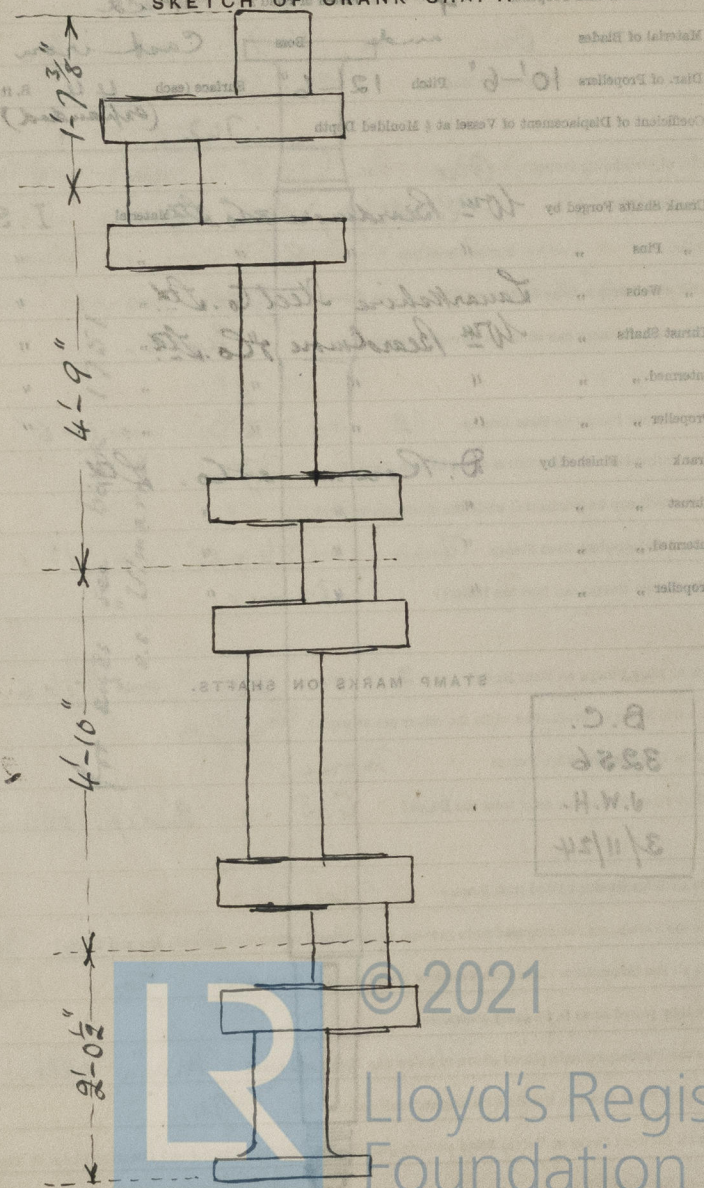
No.

" " to prevent Sea Water entering the Stern Tubes?

"

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.



No. of Blades each Propeller **4** Fitted or Solid? **Solid**
 Material of Blades **and** Boss **Cast iron**
 Diam. of Propellers **10'-6"** Pitch **12'-6"** Surface (each **44** S. ft.)
 Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth **702** (**expanded**)

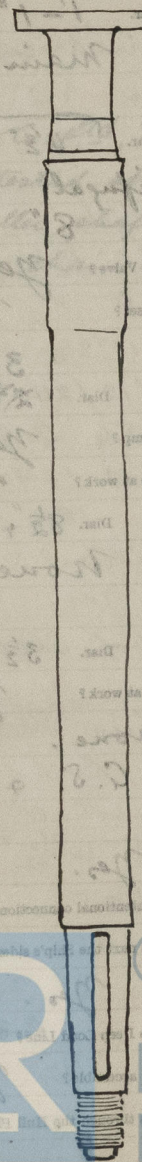
Crank Shafts Forged by **Wm Beardmore & Co. Ltd.** Material **I. S.**
 " Pins " " " " "
 " Webs " **Lanarkshire Steel Co. Ltd.** "
 Thrust Shafts " **Wm Beardmore & Co. Ltd.** "
 Intermed. " " " " "
 Propeller " " " " "
 Crank " Finished by **D. Rowan & Co. Ltd.**
 Thrust " " " " "
 Intermed. " " " "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

STAMP MARKS ON SHAFTS.

B.C.
 3256
 J.W.H.
 3/11/24

SKETCH OF PROPELLER SHAFT.

for sizes see book 1751
 " s.s. " Ulmarra "



© 2021
 Lloyd's Register
 Foundation

PUMPS, ETC.

No. of Air Pumps *One* Diar. *1'-1"* Stroke *1'-6"*

Worked by Main or Independent Engines?

main.

No. of Circulating Pumps *One* Diar. *4½"* Stroke *3½"*

Type of *Centrifugal*

Diar. of *8"* Suction from Sea

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. *3"* Stroke *1'-6"*

Are Spring-loaded Relief Valves fitted to each Pump?

yes.

Can one Pump be overhauled while the others are at work?

No. of Independent Feed Pumps *Two* Diar. *8½" + 6"* Stroke *1'-1"*

What other Pumps can feed the Boilers?

none.

No. of Bilge Pumps on Main Engine *2* Diar. *3½"* 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?

G. S. & Indep. circul.

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;

Are they fitted direct to the Hull Plating and easily accessible?

yes.

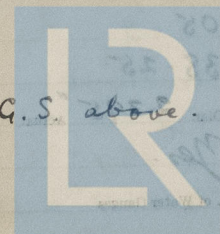
Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges

on the Outside?

yes.

BOILERS

Mathew Paul & Co. Ltd, Dumbarton 7691
 Impeller casing tested at 25 lb/sq" 31/10/24.
 (Sprocket on impeller shaft extension also turns
 main engine by chain drive.) 1'-9" dia. impeller.



© 2021

Lloyd's Register
 Foundation

BOILERS.

Works No. **808**

No. of Boilers **2** Type **Cylindrical multitubular.**

Single or Double-ended **Single.**

No. of Furnaces in each **2**

Type of Furnaces **Morrison.**

Date when Plan approved **16/6/24**

Approved Working Pressure **180 lb/sq"**

Hydraulic Test Pressure **320 "**

Date of Hydraulic Test **22/10/24.**

" when Safety Valves set **24/12/24**

Pressure at which Valves were set **186 lb/sq"**

Date of Accumulation Test **24/12/24**

Maximum Pressure under Accumulation Test **188 lb/sq"**

System of Draught **Natural.**

Can Boilers be worked separately? **Yes.**

Makers of Plates **Port-Talbot Steel Co. Ltd.**

" Stay Bars **Lanarkshire Steel Co. Ltd.**

" Rivets **N.W. Rivet, Bolt & Nut Factory Ltd.**

" Furnaces **John Marshall & Co.**

Greatest Internal Diam. of Boilers **12'-4³¹/₃₂"**

" " Length **11'-0"**

Square Feet of Heating Surface each Boiler **1405**

" " Grate " **38.25**

No. of Safety Valves each Boiler **One pr.** Rule Diam. **2.395"** Actual **2¹/₂"**

Are the Safety Valves fitted with Easing Gear? **Yes.**

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

" Test Cocks **3** " Salinometer Cocks **1**

B.C. TEST

4721

320 lbs.

180 "

R.L.C.

22/10/24

Ruips.

Starbed boiler

Port do.

Starbed 3/8" Port 3/8" Starbed 3/8" Port 3/8"



© 2021

Lloyd's Register
Foundation

Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars?

Are the Water Gauge Pillars fitted direct to the Boiler Shells or connected by Pipes?

Are these Pipes connected to Boilers by Cocks or Valves?

Are Blow-off Cocks or Valves fitted on Boiler Shells?

No. of Strakes of Shell Plating in each Boiler

Plates in each Strake

Thickness of Shell Plates Approved

in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

Are the Double Butt Straps of equal width?

Thickness of outside Butt Straps

inside

Are Longitudinal Seams Hand or Machine Riveted?

Are they Single, Double, or Treble Riveted?

No. of Rivets in a Pitch

Diam. of Rivet Holes Pitch

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes Pitch

No. of Rows of Rivets in Front End Circumferential Seams

Are these Seams Hand or Machine riveted?

Diam. of Rivet Holes Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings

Pillars
Direct.

Valves.

One.

2

1 1/2"

Siemens Martin Steel.

Butt.

Double.

Yes.

25/32"

29/32"

Machine.

Treble.

5

7 1/2"

-

-

-

-

2

Hand

2.94"

2

Machine.

2.94"

1'-5" x 1'-1"

2'-11" x 2'-7" x 1 1/2" thick.

(oval)



© 2021

Lloyd's Register
Foundation

Thickness of End Plates in Steam Space Approved

 $\frac{1}{32}$ "

" " " " " in Boilers

Pitch of Steam Space Stays $1'-6" \times 1'-1\frac{3}{4}"$ (sides) $1'-4\frac{1}{2}" \times 1'-4\frac{1}{2}"$ (center)Diar. " " " " Approved $2\frac{1}{2}"$ Threads per Inch 6

" " " " " in Boilers

Material of " " "

S. M. Steel.

How are Stays Secured?

Nuts inside & out.

Diar. and Thickness of Loose Washers on End Plates

—

" " Riveted " " "

—

Width " " Doubling Strips "

—

Thickness of Middle Back End Plates Approved

 $\frac{3}{4}"$

" " " " " in Boilers

"

Thickness of Doublings in Wide Spaces between Fireboxes

—

Pitch of Stays at

" " " "

 $1'-1\frac{1}{4}" \times 8"$

Diar. of Stays Approved

 $1\frac{3}{4}"$

Threads per Inch

10

" " " in Boilers

"

"

"

Material "

S. M. Steel.

Are Stays fitted with Nuts outside?

Yes.

Thickness of Back End Plates at Bottom Approved

 $\frac{3}{4}"$

" " " " " in Boilers

"

Pitch of Stays at Wide Spaces between Fireboxes

(see sketch)

Thickness of Doublings in " "

—

Thickness of Front End Plates at Bottom Approved

 $\frac{7}{8}"$

" " " " " in Boilers

"

No. of Longitudinal Stays in Spaces between Furnaces

3

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

" " " " in Boilers

Material "

Thickness of Front End Plates Approved

" " " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

Thickness of Doublings in

Stay Tubes at

Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back End Plates Approved

" " " " in Boilers

Pitch of Stay Tubes in Back End Plates

" " " " in Boilers

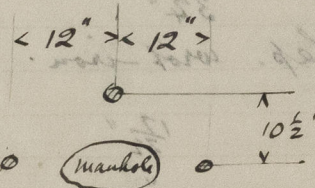
Thickness of Stay Tubes

" " " " in Boilers

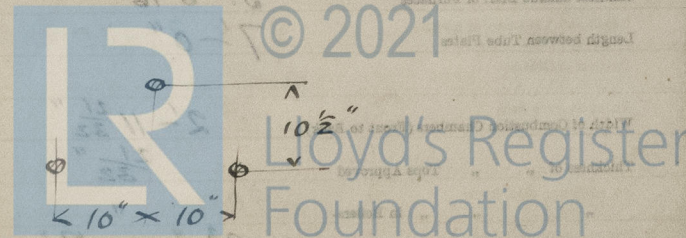
External Diam. of Tubes

Material "

Back



Front



© 2021
Lloyd's Register
Foundation

Diar. of Screwed Stays Approved

1 5/8"

Threads per Inch

10

" " " in Boilers

"

Material " "

S. M. S.

Thickness of Combustion Chamber Sides Approved

2 1/32"

" " " " in Boilers

"

Pitch of Screwed Stays in C.C. Sides

9 1/2" x 8 3/8"

Diar. " " Approved

1 5/8"

Threads per Inch

10

" " " in Boilers

"

Material " "

S. M. S.

Thickness of Combustion Chamber Backs Approved

5/8"

" " " " in Boilers

"

Pitch of Screwed Stays in C.C. Backs

8 3/8" x 8"

Diar. " " Approved

1 1/2"

Threads per Inch

10

" " " in Boilers

"

Material " "

S. M. S.

Are all Screwed Stays fitted with Nuts inside C.C.?

Yes.
3/4"

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

5

" " " Centre "

—

Depth and Thickness of Girders

9" x 3/8" (double)

Material of Girders

S. M. S.

No. of Stays in each

3

No. of Tubes, each Boiler

190

Size of Lower Manholes

1'-4" x 1'-0"

VERTICAL DONKEY BOILERS

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

SUPERHEATERS



© 2021

Lloyd's Register
Foundation

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

Branch, Welded or Seamed

Internal Diar.

Thickness

How are Joints secured?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Branch, Welded or Seamed

Internal Diar.

Thickness

How are Joints secured?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Branch, Welded or Seamed

Internal Diar.

Thickness

How are Joints secured?

Date of Hydraulic Test

Test Pressure



© 2021

Lloyd's Register
Foundation

MAIN STEAM PIPES.

No. of Lengths **2 (no 100 & 102.)**

Material **Steel**

Brazed, Welded or Seamless **Seamless**

Internal Diam. **4"**

Thickness **$\frac{1}{4}"$**

How are Flanges secured? **Screwed & expanded.**

Date of Hydraulic Test **18/12/24**

Test Pressure **540 lb/sq"**

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

LIST OF DONKEY PUMPS.
EVAPORATORS.

5445

7237 J.B. TEST

W. 388

W. 388

W. 388

H.W.L.

18/10/24

FEED WATER HEATERS

72370

W. 388

W. 388

W. 388

H.W.L.

18/10/24

W. 388

W. 388

W. 388

H.W.L.

18/10/24

5445

FEED WATER FILTERS

W. 388

W. 388

W. 388

H.W.L.

18/10/24

W. 388

W. 388

W. 388

H.W.L.

18/10/24



© 2021

Lloyd's Register
Foundation

EVAPORATORS.

3542

No. *One* Type *Vertical merchant service* Tons per DayMakers *Davie & Horne Ltd.*Working Pressure *25 lb/□* Test Pressure

Date of Test of Safety Valves under Steam

Date of Test

B.C. TEST

3088

shell 50 lbs

coil 400 "

J.W.H.

30/10/24.

FEED WATER HEATERS.

No. *One* Type *Direct Contact*Makers *G. & J. Weir Ltd.*Working Pressure *20 lb/□* Test Pressure *40 lb/□* Date of Test *11/10/24.*

75850

FEED WATER FILTERS.

3541

No. *One* Type *Pressure* Size *2" inlet.*Makers *Davie & Horne Ltd.*Working Pressure *180 lb/□* Test Pressure

Date of Test

B.C. TEST

3087

400 lbs.

J.W.H.

30/10/24.

STEERING GEAR. 3008

Hastie & Co. Greenock.

LIST OF DONKEY PUMPS.

SPARE GEAR

Independent dual feed, Combined with float tank, G. & J. Weir's 75951 and 75951*G. S. Thom, Lamont's* 12837 7½" x 4½" x 8"*Wash-Deck.* " " 12835 6" x " x 6"*Sanitary.* " " 12836 5" x 5" x "*Fresh-Water* " " 12268 3½" x 3" x 4"*Molasses.* Weir 75952

© 2021

Lloyd's Register
Foundation

LIST OF DONKEY PUMPS
SPARE GEAR.

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 Bolts		" Feed Pump Valves	1 set	" Bilge Pump Valves	1 set
" H.P. Piston Rings		" I.P. Piston Rings		" L.P. Piston Rings	
" " Springs		" " Springs		" " Springs	
" Safety Valve "	2	" Fire Bars	60	" Feed Check Valves	
" Piston Rods	1	" Connecting Rods		" Valve Spindles	
" Air Pump Rods	1	" Air Pump Buckets	1	" Air Pump Valves	1 set
" Cir. "		" Cir. "		" Cir. "	
" Crank Shafts		" Crank Pin Bushes	1	" Crosshead Bushes	1
" Propeller Shafts	1	" Propellers	2	" Propeller Blades	—
" Boiler Tubes	10	" Condenser Tubes	50	" Condenser Ferrules	100

OTHER ARTICLES OF SPARE GEAR:—

- 1 circulating pump impeller & shaft.
- 1 air pump head valve seat & guard.
- 100 assorted black iron bolts, nuts, & washers.
- 12 " brass bolts & nuts, finished.
- 50 " iron " " "
- 1 spring each size for escape valves.
- 1 dozen water gauge glasses.
- 3 assorted iron plates.
- 6 " " bars.
- 2 main feed check valves.
- 2 aux. " " " "

REFRIGERATORS

TESTS:—

1. Test of liquid level in the sight glass. The liquid level should be at the top of the sight glass when the pump is running. If the liquid level is low, the pump is not working properly.

2. Test of the pump's capacity. The pump should be able to pump out 100 gallons of water per hour. If the pump is not able to pump out 100 gallons of water per hour, it is not working properly.

3. Test of the pump's efficiency. The pump should be able to pump out 100 gallons of water per hour with a pressure of 100 lbs. per sq. in. If the pump is not able to pump out 100 gallons of water per hour with a pressure of 100 lbs. per sq. in., it is not working properly.

4. Test of the pump's durability. The pump should be able to run for 100 hours without stopping. If the pump is not able to run for 100 hours without stopping, it is not working properly.

5. Test of the pump's safety. The pump should be able to stop automatically when the liquid level is low. If the pump is not able to stop automatically when the liquid level is low, it is not working properly.

REFRIGERATORS.

E. 9239.

No. of Machines *One* Capacity of each *5 tons per day.*
 Makers *L. Sterne & Co. Ltd., Glasgow*
 Description *Single cyl. vert. 4" x 6" compressor,*
direct-coupled to single cyl. vert. steam engine
by same makers.
 No. of Steam Cylinders, each Machine *One* No. of Compressors *One* No. of Cranks *One*

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

or Independently

TESTS:-

Grids tested at Makers' works to 1000 lb/□, 16/10/24.
 1 1/4" bore wrought iron pipe coils, stamped
 about 9" from each end of each coil (JWH).
 20 grids in all, electrically welded.

Ammonia compressor, including cover, at
 500 lb/□ "hydraulic, 3/11/24. (JWH)

Condenser, four stacks of 6 pipes, (external 7'-0" long
 2" bore; internal 8'-0" x 1 1/4") at 1000 lb/□, 7/11/24. (JWH)

System of Refrigeration

Ammonia, direct expansion.

Insulation

Granulated cork.

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

Spaces? —

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

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? Yes.

Date of Test under Working Conditions

Air pressure test of 215 lb/□ "
Condenser
on grids & connections, 7/1/25. (One union renewed,
in butter room.
Ammonia test 8/1/25.

Running " 9/1/25 to 10/1/25. Also visited
for ammonia leaks in meat room 12 & 13/1/25. (One
union renewed.)

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 (Port)	46° F.	-1° F.	24 hours.	5° F.
" " (Starb)	46° F.	0° F.	"	5° F.
Meat Room.	50° F.	-2° F.	"	3° F.

Capacities, Butter Room = 4200 cub. ft.
 Meat " = 260 " "
4460 " "

Spare Liquid, 2 bottles of 50 lb. each.
 " Thermometers, 6.

Articles of Spare Gear for Refrigerating Plant carried on board:— One Crankshaft Complete,

with ecc. sheaves: One cover complete, with suction & delivery valves; one piston rod complete for engine; ditto for compressor; one piston valve & spindle complete for engine; one pair main bearing bushes complete with 2 studs; one set piston & Conn. rod bolts & washers; ecc. strap rod complete; one end eye ammonia valve, complete; one each eye press. gauge; assorted lengths & bends of piping, with flanges, couplings, & screwing appliances; assorted bolts, nuts, studs, packing, jointing, etc.

Direct-coupled to single cyl. steam eng.
2232 by W. Sisson & Co. Ltd., Gloucester.

ELECTRIC LIGHTING.

Installation Fitted by *Telford, Grier & Mackay, Ltd.*
 No. and Description of Dynamos *One 6 Kw. Comp. wound* **22292 A.**
 Makers of Dynamos *J. P. Hall & Co. Ltd. Oldham.*
 Capacity *54½* Amperes, at *110* Volts, *560* Revs. per Min.
 Current Alternating or Continuous *Continuous*
 Single or Double Wire System *Double*
 Position of Dynamos *Starboard side, bottom platform.*
 „ Main Switch Board *Beside dynamo.*
 No. of Circuits to which Switches are provided on Main Switch Board *6*

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.
Navigation.	5	100	8	7/036	1140	100%	600 MΩ
Accommodation.	31	824	17	7/036	2430	"	"
Forward.	28	200	10	7/036	1430	"	"
Engine-room.	17	16	10	7/036	"	"	"
Bridge.	21	16	9	7/036	1300	"	"
Shore.	14	16	4	2-1/064 in parallel	670	"	"

Total No. of Lights

No. of Motors driving Fans, &c.

No. of Heaters

Current required for Motors and Heaters

© 2021

Lloyd's Register
Foundation

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

None.

A. 25522

Current	Capacity	Position of Dynamometer	Single or Double Wire System	Position of Dynamometer	Main Switch Board	No. of Circuits to which Switches are provided on Main Switch Board	Particulars of these Circuits
---------	----------	-------------------------	------------------------------	-------------------------	-------------------	---	-------------------------------

Are Out-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 Out-outs constructed of Non-inflammable Material?

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

Smallest Single Wire used, No. 1/064 S.W.G., Largest, No. 1/064 S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

Saloons, State Rooms, &c., " ?

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

T. A. B. & L. C.

L. C.

T. A. B.

in tubes;

or fibre ferrules;

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?

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

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

Has the Insulation Resistance over the whole system been tested? Yes

What does the Resistance amount to? 1.1 Meg Ohms.

Is the Installation supplied with a Voltmeter? Yes.

" " " an Ampere Meter? Yes.

Date of Trial of complete Installation 7th & 8th Jan. 1925. Duration of Trial 24 hours.

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



© 2021

Lloyd's Register
Foundation

packed glands in W. T. Bulkheads.

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: *Are the Dynamometer, Main and Branch Cables, as placed in the Compartment are placed in the Compartment*

Are they attached to them?

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

Has the Installation Resistance over the whole system been tested?

What does the Resistance amount to?

Is the Installation supplied with a Voltmeter?

Is the Installation supplied with a Voltmeter?

Date of first of complete installation

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

Are the Materials used in the Construction of Engines and Boilers, so far as could be seen, sound and

trustworthy? *Yes.*

Is the Workmanship throughout thoroughly satisfactory? *Yes.*

The above correctly describes the Machinery of the S.S.

as ascertained by *me* from personal examination

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

Fees—

MAIN BOILERS.

	£	s.	d.
H.S. Sq. ft.	:	:	:

G.S. "	:	:	:
--------	---	---	---

DONKEY BOILERS.

H.S. Sq. ft.	:	:	:
--------------	---	---	---

G.S. "	:	:	:
--------	---	---	---

£	:	:	:
---	---	---	---

ENGINES.

	Cub. ft.	£	s.	d.
L.P.O.	:	:	:	:

£	:	:	:
---	---	---	---

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

4th February 1925

Fees advised

Fees paid



© 2021

Lloyd's Register
Foundation
Secretary.

GENERAL CONSTRUCTION

Particulars	Ed. It.	H.S.
MAINT. BOILERS		
Approved Plans		
WORKER BOILERS		
H.S.	Ed. It.	
ENGINEER		
Cap. It.		
Testing &c.		
Expenses		
Total		

It is submitted that this Report be approved.

This Report was adopted at a meeting of the Committee on 11th March 1924.

Approved by the Committee for the Class of M.B.S. on the 11th March 1924.

"Bonalba"

Tons advised

Tons paid

Visits. 808

25/6/24.

26 "

31/7/24.

7/8/24.

22 "

1/9/24.

4 "

16 " (R.L.G.)

30 "

6/10/24.

8 "

14 "

17 " (ship)

24 "

30 "

31 "

3/11/24.

10 " (C.S.M.)

17 "

19 "

25 "

26 "

27 " (ship)

4/12/24

17 "

18 "

23 " (ship)

24 "

7/1/25 "

8/10/24 (L. Steamer Co.)

16 " "

3/11/24 "

7 " "

© 2021

Lloyd's Register
Foundation

8/1/25

9 "

10 "

12 "

13 "

Vine 188

05/1/25

" 25

05/1/25

05/1/25

05/1/25

05/1/25

" 25

(2.12) " 25

" 25

05/1/25

" 25

" 25

(2.12) " 25

" 25

" 25

" 25

05/1/25

(2.12) " 25

" 25

" 25

" 25

" 25

(2.12) " 25

05/1/25

" 25

" 25

(2.12) " 25

" 25

05/1/25



© 2021

Lloyd's Register
Foundation

8/1/25

9 "

10 "

11 "

12 "



© 2021

Lloyd's Register
Foundation