

No. 1757

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1964* No. in Register Book *3294*

" *SPOSA* "

Makers of Engines *Cumtux Dock Co Ltd.*

Works No. *294*
BARCLAY, CURLEY & CO., LTD.

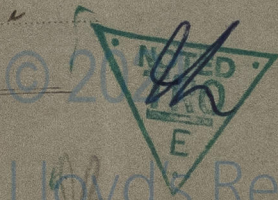
Makers of Main Boilers *Richardsons Westgarth & Co. Ltd.*

Works No. *D166. CS 2.*

Makers of Donkey Boiler

Works No.

MACHINERY



Lloyd's Register
Foundation

011341-011351-0002

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. No. in Register Book

Received at Head Office

22nd September 1926.

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Triple~~ ^{Single Triple} Screw "Whale".

"Shosa"

Official No. 148 262.

Port of Registry

Registered Owners

Leith.
South Georgia Coy. Ltd.

Engines Built by

at

Clydebank Works Ltd.
Leith Bank-on-Leas.

Main Boilers Built by

at

Richardson & Wetzguth & Co. Ltd.
West Hartlepool.

Donkey

at

Date of Completion

8-26.

First Visit

1-2-26

Last Visit

24-8-26

Total Visits

50

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RECIPROCATING ENGINES.

Works No. 294

No. of Sets 1

Description

Triple expansion.
S.P. 3 crks.

No. of Cylinders each Engine

3

No. of Cranks

3

Diars. of Cylinders

16" - 26" - 43"

Stroke

26"

Cubic feet in each L.P. Cylinder

21.8

Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr?

Yes.

" " " each Receiver?

Yes.

Type of H.P. Valves,

Piston
Piston

" 1st L.P. "

" 2nd L.P. "

" L.P. "

" Valve Gear

Stephenson Link.

" Condenser

Surface

Cooling Surface 1280 sq. ft.

Diameter of Piston Rods (plain part)

4 1/2"

Screw part (bottom of thread)

3.16"

Material

M. Steel

Diar. of Connecting Rbds (smallest part)

4 1/4"

Material

In. S.

" Crosshead Gudgeons

4 3/4"

Length of Bearing

5 3/16"

Material

In. S.

No. of Crosshead Bolts (each)

4

Diar. over Thrd.

2 1/8"

Threads per inch

8

Material

In. S.

" Crank Pin

2

Diar. over Thrd.

2 1/8"

Threads per inch

6

Material

In. S.

" Main Bearings

6

Lengths

10 7/8"

Threads per inch

6

Material

In. S.

" Bolts in each

2

Diar. over Thread

2 3/8"

Threads per inch

6

Material

In. S.

" Holding Down Bolts, each Engine

20

Diar.

1 1/4"

No. of Metal Chocks

20

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

Built seat.

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

If not, how are they fitted?

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 I.H.P.?

Pressure in 1st L.P. Receiver, 59 lbs., 2nd L.P.,

Speed on Trial

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

data:—

Builders' estimated I.H.P.

Estimated Speed

Brown Bros
Yip Tong Co.
Brown Bros
Cunthor Dock Co.

23-7-26.

24-8-26

In Sea Bay.

Yes.

1116

Revs. per min. 138

12.9 knots.

lbs., L.P., 106 lbs., Vacuum, 25 ins.



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TURBINE ENGINES.

Works No. Type of Turbines

No. of H.P. Turbines No. of L.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 } 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 H.P. Turbines at Full Power S.H.P.

If the Conditions on Trial were such that full power reports were obtained, give the following information:

" " 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 Turbo-Generating Sets

Quantity of each

Type of Turbines employed

Description of Generator

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 } 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 Generator at Full Power

" " " "

" " 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.



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Description of Generators

Is Single or Double Reduction Gear employed ?

Description of Motors

„ 1st „ Wheel

} Width

Pitch of Teeth

Estimated Pressure per lineal inch

Diar. of 2nd Reduction Pinion

„ 2nd „ Wheel

} Width

Pitch of Teeth

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.
10.0	10.0	1000	1000
11.0	11.0	1100	1100
12.0	12.0	1200	1200
13.0	13.0	1300	1300
14.0	14.0	1400	1400
15.0	15.0	1500	1500
16.0	16.0	1600	1600
17.0	17.0	1700	1700
18.0	18.0	1800	1800
19.0	19.0	1900	1900
20.0	20.0	2000	2000
21.0	21.0	2100	2100
22.0	22.0	2200	2200
23.0	23.0	2300	2300
24.0	24.0	2400	2400
25.0	25.0	2500	2500
26.0	26.0	2600	2600
27.0	27.0	2700	2700
28.0	28.0	2800	2800
29.0	29.0	2900	2900
30.0	30.0	3000	3000
31.0	31.0	3100	3100
32.0	32.0	3200	3200
33.0	33.0	3300	3300
34.0	34.0	3400	3400
35.0	35.0	3500	3500
36.0	36.0	3600	3600
37.0	37.0	3700	3700
38.0	38.0	3800	3800
39.0	39.0	3900	3900
40.0	40.0	4000	4000
41.0	41.0	4100	4100
42.0	42.0	4200	4200
43.0	43.0	4300	4300
44.0	44.0	4400	4400
45.0	45.0	4500	4500
46.0	46.0	4600	4600
47.0	47.0	4700	4700
48.0	48.0	4800	4800
49.0	49.0	4900	4900
50.0	50.0	5000	5000
51.0	51.0	5100	5100
52.0	52.0	5200	5200
53.0	53.0	5300	5300
54.0	54.0	5400	5400
55.0	55.0	5500	5500
56.0	56.0	5600	5600
57.0	57.0	5700	5700
58.0	58.0	5800	5800
59.0	59.0	5900	5900
60.0	60.0	6000	6000
61.0	61.0	6100	6100
62.0	62.0	6200	6200
63.0	63.0	6300	6300
64.0	64.0	6400	6400
65.0	65.0	6500	6500
66.0	66.0	6600	6600
67.0	67.0	6700	6700
68.0	68.0	6800	6800
69.0	69.0	6900	6900
70.0	70.0	7000	7000
71.0	71.0	7100	7100
72.0	72.0	7200	7200
73.0	73.0	7300	7300
74.0	74.0	7400	7400
75.0	75.0	7500	7500
76.0	76.0	7600	7600
77.0	77.0	7700	7700
78.0	78.0	7800	7800
79.0	79.0	7900	7900
80.0	80.0	8000	8000
81.0	81.0	8100	8100
82.0	82.0	8200	8200
83.0	83.0	8300	8300
84.0	84.0	8400	8400
85.0	85.0	8500	8500
86.0	86.0	8600	8600
87.0	87.0	8700	8700
88.0	88.0	8800	8800
89.0	89.0	8900	8900
90.0	90.0	9000	9000
91.0	91.0	9100	9100
92.0	92.0	9200	9200
93.0	93.0	9300	9300
94.0	94.0	9400	9400
95.0	95.0	9500	9500</

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

Dist. over 1,000 ft. © 2001

For information on the state of the industry, visit www.enr.construction.com/resources/special/

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Education

SHAFTING.

Are the Crank Shafts Built or Solid?

Built.

No. of Lengths in each

8.25

Angle of Cranks

120°

Diar. by Rule

Actual

8 1/2"

In Way of Webs

8 7/8"

,, of Crank Pins

8 3/4"

Length between Webs

11"

Greatest Width of Crank Webs

24"

Thickness

5 1/4"

Least

13"

,,

5 1/4"

Diar. of Keys in Crank Webs

1 1/2"

Length

4"

,, Dowels in Crank Pins

Length

3 1/2"

Screwed or Plain

Plain

No. of Bolts each Coupling

6

Diar. at Mid Length

2"

Diar. of Pitch Circle

12 1/2"

Greatest Distance from Edge of Main Bearing to Crank Web

3/16"

Type of Thrust Blocks

Horseshoe

No. ,, Rings

6

Diar. of Thrust Shafts at bottom of Collars

8 1/2"

No. of Collars

6

,, ,, Forward Coupling

8 1/2"

At Aft Coupling

8 1/2"

Diar. of Intermediate Shafting by Rule

Actual

No. of Lengths

No. of Bolts, each Coupling

Diar. at Mid Length

Diar. of Pitch Circle

Diar. of Propeller Shafts by Rule

8.4"

Actual

8 7/8"

At Couplings

8 1/2"

Are Propeller Shafts fitted with Continuous Brass Liners?

Continuous

Diar. over Liners

10"

Length of After Bearings

4-0.2"

Of what Material are the After Bearings composed?

Gunmetal

Are Means provided for lubricating the After Bearings with Oil?

no

,, ,, to prevent Sea Water entering the Stern Tubes?

no

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.

Same as of "Swona"

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No. of Blades each Propeller ⁴ Fitted or Solid? *solid*
 Material of Blades *Cast steel* Boss *Cast Steel*
 Diam. of Propellers *10'-0"* Pitch *10'-4 1/2"* Surface (each) *41.5* S. ft.
 Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth

Crank Shafts Forged by

Lyle Forge Co.

Material

L.S.

Pins

Webs

Thrust Shafts

Intermed.,

Propeller

Crank Finished by

Thrust

Intermed.,

Propeller

STAMP MARKS ON SHAFTS.

Crank Shaft:-

B.C.
Nº 10080
8-3-26
R.S.

Thrust Tail Shaft:-

B.C.
Nº 10082
26-3-26
R.S.

Star Tail Shaft:-

B.C.
Nº 10082
26-3-26
R.S.

SKETCH OF PROPELLER SHAFT.

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1-8133

BOILERS.

Works No. *D 166*

No. of Boilers *1* Type *Cylindrical multitubular*

Single or Double-ended *single.*

No. of Furnaces in each *3*

Type of Furnaces *Slighton.*

Date when Plan approved *30-1-26*

Approved Working Pressure *200 lbs.*

Hydraulic Test Pressure *350 "*

Date of Hydraulic Test *21-4-26*

" when Safety Valves set *23-7-26*

Pressure at which Valves were set *206 lbs.*

Date of Accumulation Test *23-7-26*

Maximum Pressure under Accumulation Test *210 lbs.*

System of Draught *Howden's C.A.*

Can Boilers be worked separately? *yes.*

Makers of Plates *Oldfield & Sons Ltd.*

" Stay Bars *R. B. & Co. Ltd.*

" Rivets *Leeds Forge Co.*

" Furnaces *15'-3"*

Greatest Internal Diam. of Boilers *12'-1"*

" " Length " *2890 ϕ*

Square Feet of Heating Surface each Boiler *61 ϕ*

" " Grate " " *61 ϕ*

No. of Safety Valves each Boiler *2* Rule Diam. Actual *3"*

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

No. of Pressure Gauges, each Boiler *2* No. of Water Gauges *2*

" Test Cocks " *✓* " Salinometer Cocks *1*

NEW BOILER BY BARCLAY, CURLE & CO., LTD.

Works No. *CS 2*

No. of Boilers *1* Type *Cylindrical Multitubular*

Single or Double-ended *Single*

No. of Furnaces in each *3*

Type of Furnaces *Slighton*

Date when Plan approved *29-4-30*

Approved Working Pressure *200 lbs/ft²*

Hydraulic Test Pressure *350 "*

Date of Hydraulic Test *15-8-30*

" when Safety Valves set

Pressure at which Valves were set

Date of Accumulation Test

Maximum Pressure under Accumulation Test

System of Draught *Howden's C.A.*

Can Boilers be worked separately? *yes.*

Makers of Plates *D. Lechille & Sons, Ltd.*

" Stay Bars *do.*

" Rivets *R. B. & Co. Ltd.*

" Furnaces *Broomside Boiler Wks. Leeds, Ltd.*

Greatest Internal Diam. of Boilers *15'-3"*

" " Length " *12'-0"*

Square Feet of Heating Surface each Boiler *2890 ϕ*

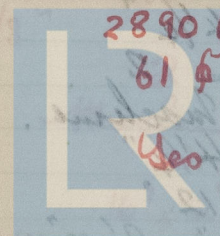
" " Grate " " *61 ϕ*

No. of Safety Valves each Boiler *2* Rule Diam. Actual *3"*

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

No. of Pressure Gauges, each Boiler *2* No. of Water Gauges *2*

" Test Cocks " *✓* " Salinometer Cocks *1*



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

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

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 *1*

Plates in each Strake *2*

Thickness of Shell Plates Approved *1 3/8"*

in Boilers *1 3/8"*

Are the Rivets Iron or Steel? *steel.*

Are the Longitudinal Seams Butt or Lap Joints? *butt.*

Are the Butt Straps Single or Double? *double.*

Are the Double Butt Straps of equal width? *yes.*

Thickness of outside Butt Straps *1 1/16"*

inside *1 3/16"*

Are Longitudinal Seams Hand or Machine Riveted? *machine.*

Are they Single, Double, or Treble Riveted? *treble.*

No. of Rivets in a Pitch *5*

Diar. of Rivet Holes *1 7/16"* Pitch *9 7/8"*

No. of Rows of Rivets in Centre Circumferential Seams *✓*

Are these Seams Hand or Machine Riveted? *✓*

Diar. of Rivet Holes *✓* Pitch *✓*

No. of Rows of Rivets in Front End Circumferential Seams *2*

Are these Seams Hand or Machine riveted? *Hand.*

Diar. of Rivet Holes *1 7/16"* Pitch *4 1/4"*

No. of Rows of Rivets in Back End Circumferential Seams *2*

Are these Seams Hand or Machine Riveted? *Machine.*

Diar. of Rivet Holes *1 7/16"* Pitch *4 1/4"*

Size of Manholes in Shell *16" x 12"*

Dimensions of Compensating Rings *2'-9" x 2'-5" x 1 3/8"*

*on pillars
direct*

✓

✓

1

3

1 1/32"

1 1/32"

*Steel
Butt.
Double.*

Yes

1 1/16"

1 3/16"

*Machine
Treble*

5

1 3/8"

9 1/2"

✓

✓

✓

2

Hand

1 3/8"

2

Machine

1 3/8"

16" x 12"

2'-9 1/2" x 3'-1 1/2" x 1 1/32"

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Thickness of End Plates in Steam Space Approved

 $1\frac{1}{32}$ "

" " " " " in Boilers

 $1\frac{1}{32}$ "

Pitch of Steam Space Stays

 $1\frac{1}{2} \times 1\frac{1}{2}$ "

Diar. " " " " Approved

 $3\frac{1}{2}$ Threads per Inch 6

" " " " " in Boilers

 $3\frac{1}{2}$ " 6

Material of " " "

Steel

How are Stays Secured?

double nuts + washers.

Diar. and Thickness of Loose Washers on End Plates

 $12\frac{1}{2} \times 1$ "

" " Riveted " " "

Width " " Doubling Strips "

Thickness of Middle Back End Plates Approved

 $3\frac{1}{32}$ "

" " " " " in Boilers

 $3\frac{1}{32}$ "

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at

 $1\frac{1}{8} \times 8\frac{5}{8}$ "

Diar. of Stays Approved

 $1\frac{1}{8}$ Threads per Inch 9

" " in Boilers

 $1\frac{1}{8}$ 9

Material "

Steel

Are Stays fitted with Nuts outside?

y/s.

Thickness of Back End Plates at Bottom Approved

 $3\frac{1}{32}$ "

" " " " " in Boilers

 $3\frac{1}{32}$ "

Pitch of Stays at Wide Spaces between Fireboxes

 $14 \times 8\frac{3}{8}$ "

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom Approved

 $7\frac{1}{8}$ "

" " " " " in Boilers

 $7\frac{1}{8}$ "

No. of Longitudinal Stays in Spaces between Furnaces

1

Pitch of Stays Approved

" " " " " in Boilers

Material "

Thickness of Front Tube 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 Tube Plates Approved

" " " " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" " " " "

Thickness of Stay Tubes

" " " " "

External Diam. of Tubes

Material

Thickness of Furnace Plates Approved

" " " " " in Boilers

Smallest outside Diam. of Furnace

Length between Tube Plates

Width of Combustion Chamber (Front to Back)

Thickness of

" " " " "

Pitch of Stays in C.O. Top

 $1\frac{23}{64}$ " $1\frac{23}{64}$ " $1\frac{1}{4} \times 1\frac{1}{2}$ " $3\frac{3}{8}$ 6 $3\frac{3}{8}$ 6

Steel

Double Nuts

 $2\frac{5}{32}$ " $2\frac{5}{32}$ " $13\frac{1}{2} \times 8$ " $1\frac{7}{8}$ 9 $1\frac{7}{8}$ 9

Steel

Yes.

 $2\frac{5}{32}$ " $2\frac{5}{32}$ " $13\frac{1}{2} \times 8$ " $3\frac{1}{4}$ $2\frac{7}{32}$ " $2\frac{7}{32}$ " $2\frac{7}{32}$ "

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Diar. of Stays Approved

3"

Threads per Inch

9

" " in Boilers

3"

"

9

Material "

steel.

Thickness of Front Tube Plates Approved

 $\frac{7}{8}$ "

" " " in Boilers

 $\frac{7}{8}$ "

Pitch of Stay Tubes at Spaces between Stacks of Tubes

 $18\frac{1}{2}" \times 7\frac{1}{4}"$

Thickness of Doublings in

" " "

 $\frac{1}{2}" \times \frac{3}{8}"$

" Stay Tubes at

" " "

 $\frac{1}{2}" \times \frac{3}{8}"$

Are Stay Tubes fitted with Nuts at Front End?

yes.

Thickness of Back Tube Plates Approved

 $2\frac{5}{32}"$

" " " in Boilers

 $2\frac{5}{32}"$

Pitch of Stay Tubes in Back Tube Plates

 $9\frac{1}{8}" \times 7\frac{1}{2}"$

" Plain "

 $3\frac{5}{8}" \times 3\frac{3}{4}"$

Thickness of Stay Tubes

 $\frac{1}{2}" \times \frac{3}{8}"$

" Plain "

 $8\frac{1}{16}"$

External Diar. of Tubes

 $2\frac{1}{2}"$

Material "

iron.

Thickness of Furnace Plates Approved

 $\frac{5}{8}"$

" " " in Boilers

 $\frac{5}{8}"$

Smallest outside Diar. of Furnaces

 $3'-8\frac{3}{4}"$

Length between Tube Plates

 $8'-3"$

Width of Combustion Chambers (Front to Back)

 $3'-1\frac{7}{16}"$

Thickness of " " Tops Approved

 $\frac{1}{16}"$

" " " in Boilers

 $\frac{1}{16}"$

Pitch of Screwed Stays in C.C. Tops

 $9\frac{1}{2}" \times 8\frac{1}{4}"$ $2\frac{3}{4}"$

6

 $2\frac{3}{4}"$

6

Steel

 $2\frac{1}{32}"$ $2\frac{1}{32}"$ $13\frac{1}{2}" \times 7\frac{1}{4}"$ $\frac{3}{8}"$

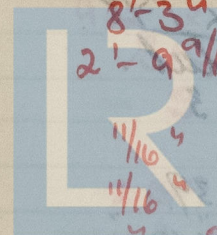
yes.

 $\frac{3}{4}"$ $\frac{3}{4}"$ $7\frac{1}{2}" \times 7\frac{1}{4}"$ $3\frac{3}{4}" \times 3\frac{5}{8}"$ $3\frac{3}{8}" \times 1\frac{1}{4}"$

9 W.B.

 $2\frac{1}{2}"$

Steel

 $\frac{5}{8}"$ $\frac{5}{8}"$ $3'-8\frac{3}{4}"$ $8'-3"$ $2'-9\frac{9}{16}"$ $\frac{1}{16}"$ $\frac{1}{16}"$ $10" \times 8"$ 

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Diar. of Screwed Stays Approved $1\frac{3}{4}"$ Threads per Inch 9
 " " " in Boilers $1\frac{3}{4}"$ 9
 Material " " *steel*

Thickness of Combustion Chamber Sides Approved $2\frac{1}{32}"$
 " " " " in Boilers $2\frac{1}{32}"$
 Pitch of Screwed Stays in C.C. Sides $8\frac{1}{2}" \times 8\frac{1}{4}"$
 Diar. " " Approved $1\frac{5}{8}"$ Threads per Inch 9
 " " " in Boilers $1\frac{5}{8}"$ 9
 Material " " *steel*

Thickness of Combustion Chamber Backs Approved $2\frac{1}{32}"$
 " " " " in Boilers $2\frac{1}{32}"$
 Pitch of Screwed Stays in C.C. Backs $8\frac{1}{8}" \times 8\frac{1}{4}"$
 Diar. " " Approved $1\frac{7}{8}"$ Threads per Inch 9
 " " " in Boilers $1\frac{7}{8}"$ 9
 Material " " *steel*

Are all Screwed Stays fitted with Nuts inside C.O.? *yes*
 Thickness of Combustion Chamber Bottoms $1\frac{3}{16}"$

No. of Girders over each Wing Chamber 3
 " " " Centre " 2
 Depth and Thickness of Girders $10" \times 1\frac{5}{8}"$
 Material of Girders *steel*
 No. of Stays in each 3

No. of Tubes, each Boiler 439
 Size of Lower Manholes 16×12

$1\frac{3}{4}"$ 9
 $1\frac{3}{4}"$ 9

Steel

$1\frac{1}{16}"$
 $1\frac{1}{16}"$
 $10\frac{1}{4}" \times 8\frac{1}{4}"$
 $1\frac{3}{4}" \times 9$
 $1\frac{3}{4}"$ 9
Steel

$1\frac{1}{16}"$
 $1\frac{1}{16}"$
 $10\frac{1}{4}" \times 8\frac{1}{4}"$
 $1\frac{7}{8}" + 1\frac{3}{4}"$
 $1\frac{7}{8}" + 1\frac{3}{4}"$
Steel

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

4
 2
 $9\frac{1}{2}" \times 2 @ 1\frac{3}{16}"$
Steel

439
 16×12

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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

Pressure, Weight or Dimensions

Internal Diar.

Thickness

How are Pipes secured?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Pressure, Weight or Dimensions

Internal Diar.

Thickness

How are Pipes secured?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Pressure, Weight or Dimensions

Internal Diar.

Thickness

How are Pipes secured?

Date of Hydraulic Test

Test Pressure



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MAIN STEAM PIPES.

No. of Lengths	1	1	1
Material	Copper.		
Brazed, Welded or Seamless	solid drawn.		
Internal Diam.	4"	4"	4"
Thickness	5-	10-	10-
How are Flanges secured?	brake d.		
Date of Hydraulic Test	4-6-26	7-6-26	9-6-26
Test Pressure	400 lbs.		

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	

Handwritten notes:
 No. of Lengths: 1
 Material: Copper
 Brazed, Welded or Seamless: solid drawn
 Internal Diam.: 4"
 Thickness: 5-
 How are Flanges secured?: brake d.
 Date of Hydraulic Test: 4-6-26
 Test Pressure: 400 lbs.

Handwritten notes:
 No. of Lengths: 1
 Material: Copper
 Brazed, Welded or Seamless: solid drawn
 Internal Diam.: 4"
 Thickness: 5-
 How are Flanges secured?: brake d.
 Date of Hydraulic Test: 4-6-26
 Test Pressure: 400 lbs.

FEED WATER FILTERS.

No.	
Type	
Material	
Working Pressure	
Test Pressure	
Date of Test	



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EVAPORATORS.

No.	Type	Tons per Day
Makers		
Working Pressure	Test Pressure	Date of Test
Date of Test of Safety Valves under Steam		

FEED WATER HEATERS

No. 1 Type Surface Feed Heater - Inhaust Steam.
Makers Calif. Rayners.
Working Pressure 200 lbs. Test Pressure 360 lbs. Date of Test

FEED WATER FILTERS.

No.	Type	Slab
Makers		
Working Pressure	Test Pressure	Date of Test

LIST OF DONKEY PUMPS

LIST OF DONKEY PUMPS.
 Thos. Lamont's Vertical Duplex
 General Services Donkey. 6" x 4 1/2" x 6"
 One Pair Vertical Duplex pumps.
 6" x 8" x 18"

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OTHER ARTICLES OF SPARE GEAR:—

REFRIGERATORS.

No. of Machines 2 Capacity of each 2
 Makers 2
 Description 2
 No. of Steam Cylinders, each Machine 2 No. of Compressors 2 No. of Cranks 2
 Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently
 Crank Shafts 1 Propeller Shafts 1
 Main Shafts 8

System of Refrigeration

Insulation

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?

Date of Test under Working Conditions

RESULTS OF TRIALS.

COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after hours.
Forward	63.0	5.1	7.036	1389
Midship	5.0	5.0	7.036	1389
Aft	5.0	5.0	7.036	1389

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



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No. of Lights	Time required to replace lamps	No. of lamps	Time to replace lamps	Description
Description				

ELECTRIC LIGHTING.

Installation Fitted by

R. Pickering & Sons Ltd.

No. and Description of Dynamos

Compound wound

Makers of Dynamos

Cunderland Forge & Eng Co Ltd.

Capacity

45

Amperes, at

110

Volts,

340 Revols. per Min.

Current Alternating or Continuous

Continuous

Single or Double Wire System

double

Position of Dynamos

Starling Platform.

Main Switch Board

No. of Circuits to which Switches are provided on Main Switch Board

5

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.
Forward Accom.	14	630 watts.	5.1	7/036	.1389	100%	900000
Irrigation	10	500 watts.	5	7/036	.1389	"	"
Engin Room	19	570 watts.	5.7	7/036	.1389	"	"
Wireless	15	75	7/064	.1389	"	"	"

Total No. of Lights

46

No. of Motors driving Fans, &c.

No. of Heaters

Current required for Motors and Heaters

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

Particulars of these Circuits—	General	Number of Lights	Number of Motors	Number of Pumps	Number of Fans	Number of Other Appliances	Number of Other Appliances	Number of Other Appliances	Number of Other Appliances
Are Out-outs fitted as follows?—									
On Main Switch Board, to Cables of Main Circuits	yes.								
On Aux. " " each Auxiliary Circuit	yes.								
Wherever a Cable is reduced in size	yes.								
To each Lamp Circuit	yes.								
To both Flow and Return Wires of all Circuits when the Double-Wire System is adopted	yes.								
Are the Fuses of Standard Sizes?	yes.								
Are all Switches and Out-outs constructed of Non-inflammable Material?	yes.								
Are they placed so as to be always and easily accessible?	yes.								
Smallest Single Wire used, No. 1/044 S.W.G., Largest, No. 7/064 S.W.G.									
How are Conductors in Engine and Boiler Spaces protected?	had covered / Armoured.								
" " Saloons, State Rooms, &c., " ?	"								
What special protection is provided in the following cases?—	had covered / Armoured.								
(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 not impaired? none.

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

Are all Hull Connections for Single-Wire Systems made with Screws of large Surface? yes.

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? 300,000 Ohms. Ohms.

Is the Installation supplied with a Voltmeter? yes.

" " " an Ampere Meter? yes.

Date of Trial of complete Installation 24-8-26 Duration of Trial 6 hours.

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



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GENERAL CONSTRUCTION.

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

Approved Plans? *Yes. Yes.*

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

Surveyor.

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 Amperes Meter?

Date of Trial or complete Installation

Have all the requirements of Section 12 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. Yes.*

Is the Workmanship throughout thoroughly satisfactory? *Yes. Yes.*

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

as ascertained by ^{me} from personal examination

" SPOSA "

J.D. Stephenson *K.S.*

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

Fees—

MAIN BOILERS.

		£	s.	d.
H.S.	2890	Sq. ft.	:	:
G.S.	61	"	:	:

DONKEY BOILERS.

H.S.	Sq. ft.	:	:
G.S.	"	:	:
	£	:	:

ENGINES.

L.P.O.	21.8	Cub. ft.	:	:
		£	:	:
Testing, &c. ...		:	:	
		£	:	:
Expenses ...		:	:	
Total ...	£	:	:	

It is submitted that this Report be approved,

Maxie King
Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 6th October 1926

Fees advised

Fees paid



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