

No. 1753

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1940* No. in Register Book *3267*

" *SPINA* "

Makers of Engines

Smiths Dock Co. Ltd.

Works No. *291*

Makers of Main Boilers

Cawthorne Leslie Co. Ltd.

Works No. *8981 A.*

Makers of Donkey Boiler

Works No. *✓*

MACHINERY.



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No.

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. *1940* No. in Register Book *3267*

Received at Head Office *20th May 1926*

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Triple~~ *Whaler* Screw *"Shina"*

Official No.

Port of Registry *Leith*

Registered Owners

South Georgia Coy.

Engines Built by

Swinton Dock Co. Ltd.

at

South Bank-on-Sea.

Main Boilers Built by

Guthrie & Co. Ltd.

at

Newcastle-on-Tyne.

Donkey

at

Date of Completion

3-26

First Visit *6-11-25*

Last Visit *23-5-26*

Total Visits *35*

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RECIPROCATING ENGINES.

Works No. **291** No. of Sets **1** Description **Triple Expansion. S.C. 3 Cyls.**

No. of Cylinders each Engine **3** No. of Cranks **3**
 Diars. of Cylinders **12 1/4" - 20" - 34"** Stroke **24"**

Cubic feet in each L.P. Cylinder **12.6**

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

" " each Receiver? **ylo.**

Type of H.P. Valves, **Piston**

" 1st L.P. " **Slide.**

" 2nd L.P. "

" L.P. " **Slide.**

" Valve Gear **Stephenson Link.**

" Condenser **Surface.**

Cooling Surface **642** sq. ft.

Diameter of Piston Rods (plain part) **3 3/8"**

Screw part (bottom of thread) **2.384"**

Material **Steel.**

Diar. of Connecting Rods (smallest part) **3 3/8"**

Material **Iron, I.P.**

" Crosshead Gudgeons **3 5/8"**

Length of Bearing **3 3/4"**

Material **Steel.**

No. of Crosshead Bolts (each) **4**

Diar. over Thrd. **1 1/2"**

Thrds. per inch **8**

Material **Steel.**

" Crank Pin " **2**

" **2"**

" **2"**

" **7"**

" Main Bearings **6**

Lengths **4 3/8"**

" Bolts in each **2**

Diar. over Thread **1 7/8"**

Threads per inch **7**

Material **Steel.**

" Holding Down Bolts, each Engine **51**

Diar. **1 1/4"**

No. of Metal Chocks **51**

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? **no**

If not, how are they fitted?

Connecting Rods, Forged by **Cumtts Wallenda Forge.**

Piston " "

Crossheads, **Cumtts Wallenda Forge.**

Connecting Rods, Finished by **Cumtts Dock Co. Ltd.**

Piston " "

Crossheads, " "

Date of Harbour Trial **19-3-26.**

" Trial Trip **23-3-26.**

Trials run at **In Loo Bay.**

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

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

593.6

Revs. per min. **132**

Pressure in 1st L.P. Receiver, **64.2** lbs., 2nd L.P.,

lbs., L.P., **11.1** lbs., Vacuum, **25** ins.

Speed on Trial **11.45 knots.**

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

data:—

Builders' estimated I.H.P.

Revs. per min.

Estimated Speed



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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

Diur. of 1st Reduction Pinion	}	Width	Pitch of Teeth
„ 1st „ Wheel			

Estimated Pressure per lineal inch

Diar. 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

11 Trial Trip

Trials run at

Speed on Trial	Knots.	Propeller Revols. per min.
10.0	10.0	1000
10.5	10.5	1050
11.0	11.0	1100
11.5	11.5	1150
12.0	12.0	1200
12.5	12.5	1250
13.0	13.0	1300
13.5	13.5	1350
14.0	14.0	1400
14.5	14.5	1450
15.0	15.0	1500
15.5	15.5	1550
16.0	16.0	1600
16.5	16.5	1650
17.0	17.0	1700
17.5	17.5	1750
18.0	18.0	1800
18.5	18.5	1850
19.0	19.0	1900
19.5	19.5	1950
20.0	20.0	2000
20.5	20.5	2050
21.0	21.0	2100
21.5	21.5	2150
22.0	22.0	2200
22.5	22.5	2250
23.0	23.0	2300
23.5	23.5	2350
24.0	24.0	2400
24.5	24.5	2450
25.0	25.0	2500
25.5	25.5	2550
26.0	26.0	2600
26.5	26.5	2650
27.0	27.0	2700
27.5	27.5	2750
28.0	28.0	2800
28.5	28.5	2850
29.0	29.0	2900
29.5	29.5	2950
30.0	30.0	3000
30.5	30.5	3050
31.0	31.0	3100
31.5	31.5	3150
32.0	32.0	3200
32.5	32.5	3250
33.0	33.0	3300
33.5	33.5	3350
34.0	34.0	3400
34.5	34.5	3450
35.0	35.0	3500
35.5	35.5	3550
36.0	36.0	3600
36.5	36.5	3650
37.0	37.0	3700
37.5	37.5	3750
38.0	38.0	3800
38.5	38.5	3850
39.0	39.0	3900
39.5	39.5	3950
40.0	40.0	4000
40.5	40.5	4050
41.0	41.0	4100
41.5	41.5	4150
42.0	42.0	4200
42.5	42.5	4250
43.0	43.0	4300
43.5	43.5	4350
44.0	44.0	4400
44.5	44.5	4450
45.0	45.0	4500
45.5	45.5	4550
46.0	46.0	4600
46.5	46.5	4650
47.0	47.0	4700
47.5	47.5	4750
48.0	48.0	4800
48.5	48.5	4850
49.0	49.0	4900
49.5	49.5	4950
50.0	50.0	5000
50.5	50.5	5050
51.0	51.0	5100
51.5	51.5	5150
52.0	52.0	5200
52.5	52.5	5250
53.0	53.0	5300
53.5	53.5	5350
54.0	54.0	5400
54.5	54.5	5450
55.0	55.0	5500
55.5	55.5	5550
56.0	56.0	5600
56.5	56.5	5650
57.0	57.0	5700
57.5	57.5	5750
58.0	58.0	5800
58.5	58.5	5850
59.0	59.0	5900
59.5	59.5	5950
60.0	60.0	6000
60.5	60.5	6050
61.0	61.0	6100
61.5	61.5	6150
62.0	62.0	6200
62.5	62.5	6250
63.0	63.0	6300
63.5	63.5	6350
64.0	64.0	6400
64.5</		

S.H.P.

Generators

Meters

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

4

Angle of Cranks

120°

Diam. by Rule

6.6"

Actual

6 7/8"

In Way of Webs

6 7/8"

" of Crank Pins

6 7/8"

Length between Webs

7 1/4"

Greatest Width of Crank Webs

13"

Thickness

4 1/4"

Least

"

"

10"

"

4 1/4"

Diam. of Keys in Crank Webs

1 1/4"

Length

3 3/4"

" Dowels in Crank Pins

1

Length

3 1/2"

Screwed or Plain

plain.

No. of Bolts each Coupling

4

Diam. at Mid Length

2"

Diam. of Pitch Circle

11 1/4"

Greatest Distance from Edge of Main Bearing to Crank Web

1/8"

Type of Thrust Blocks

None shal.

No. " Rings

4

Diam. of Thrust Shafts at bottom of Collars

6 7/8"

No. of Collars

4

" " Forward Coupling

6 7/8"

At Aft Coupling

6 7/8"

Diam. of Intermediate Shafting by Rule

☒

Actual

☐

No. of Lengths

☐

No. of Bolts, each Coupling

☒

Diam. at Mid Length

☒

Diam. of Pitch Circle

☐

Diam. of Propeller Shafts by Rule

6.94"

Actual

7 3/8"

At Couplings

6 7/8"

Are Propeller Shafts fitted with Continuous Brass Liners?

Yes.

Diam. over Liners

8 7/16"

Length of After Bearings

3'-3 1/2"

Of what Material are the After Bearings composed?

Legnum vilas.

Are Means provided for lubricating the After Bearings with Oil?

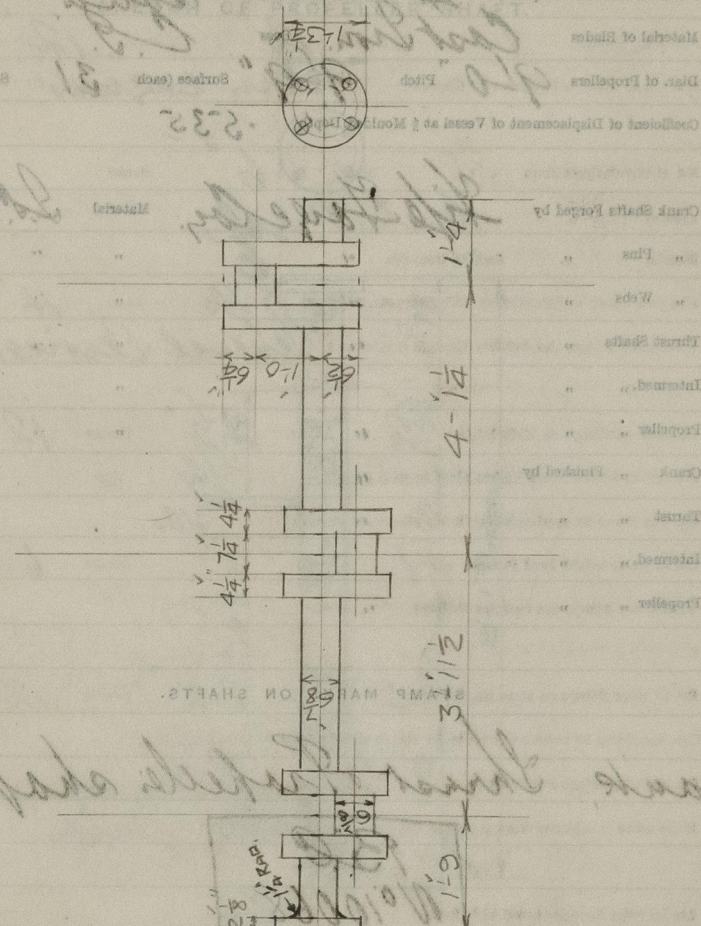
no

" " to prevent Sea Water entering the Stern Tubes?

no.

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.



No. of Blades each Propeller

4

Fitted or Solid?

Boss

Material of Blades

Cast Iron

Diam. of Propellers

9'0"

Pitch

9'9"

Surface (each)

31

S. ft.

Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth

.535

Crank Shafts Forged by

Yip Yee Co.

Material

L.S.

Pins

Webs

Thrust Shafts

Intermed. "

Propeller "

Crank " Finished by

Thrust "

Intermed. "

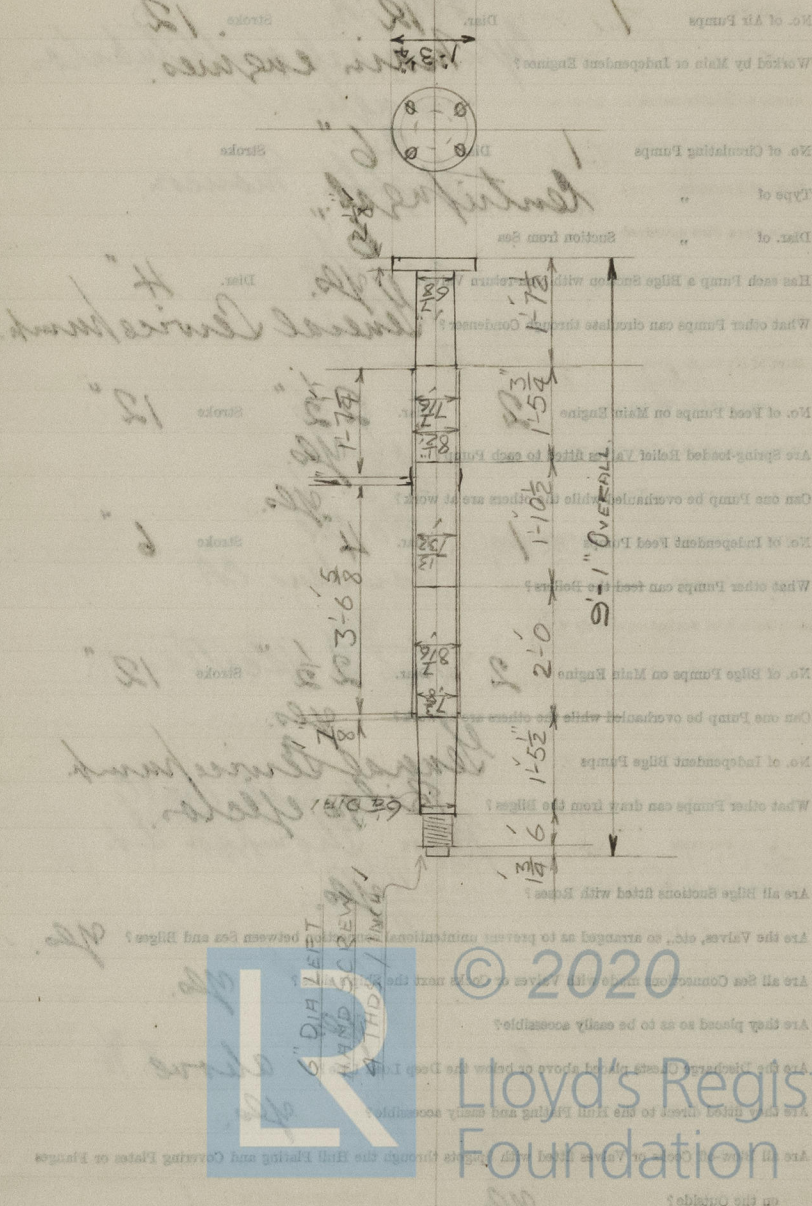
Propeller "

STAMP MARKS ON SHAFTS.

Crank, Thrust Propeller shafts:-

B.C.
 No 10068
 16-12-25
 R.S.

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps

1

Diar.

12"

Stroke

12"

Worked by Main or Independent Engines?

main engines.

No. of Circulating Pumps

1

Diar.

6"

Stroke

Type of

"

centrifugal

Diar. of

"

Suction from Sea

6"

Has each Pump a Bilge Suction with Non-return Valve?

Yls.

Diar.

4"

What other Pumps can circulate through Condenser?

General Service pump.

No. of Feed Pumps on Main Engine

2

Diar.

2 1/2"

Stroke

12"

Are Spring-loaded Relief Valves fitted to each Pump?

Yls.

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

Yls.

No. of Independent Feed Pumps

1

Diar.

4"

Stroke

6"

What other Pumps can feed the Boilers?

No. of Bilge Pumps on Main Engine

2

Diar.

2 1/2"

Stroke

12"

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

Yls.

No. of Independent Bilge Pumps

General Service pump.

What other Pumps can draw from the Bilges?

Bilge ejector.

Are all Bilge Suctions fitted with Roses?

Yls.

Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges?

Yls.

Are all Sea Connections made with Valves or Cocks next the Ship's sides?

Yls.

Are they placed so as to be easily accessible?

Yls.

Are the Discharge Chests placed above or below the Deep Load Line?

above

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

Yls.

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

Yls.

BOILERS

No. of Boilers

Single or Double-ended

No. of Furnaces in each

Type of Furnaces

Date when first approved

Approved Working Pressure

Hydraulic Test Pressure

Date of Hydraulic Test

When Safety Valves set

Pressure at which Valves were set

Date of Accumulation Test

Maximum Pressure under Accumulation Test

System of Drafting

Can Boilers be worked separately?

Makers of Boilers

No. of Boilers

Boiler Room

Height

Furnaces

Greatest Internal Diam. of Boilers

Length

Square Foot of Heating Surface

Diameter

No. of Boilers

No. of Boilers

Test Cocks



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BOILERS.

8981 A.
Cylindrical multitubular.
single.
2
Slighter. Manson.
200 lbs.
350 "
8-1-26
19-3-26
206 lbs.
19-3-26
210 lbs.
Hawkins C.A.
yes
Stub Co. of Scotland.
Rivet Bolt Nut Co.
John Thompson Ltd.
11'-9"
11'-0"
1509 ft.
40 ft.
2
Rule Dia. Actual 2 3/4"
yes.
2
3
1
1

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

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? *values.*

No. of Strakes of Shell Plating in each Boiler *1*

„ Plates in each Strake *1*

Thickness of Shell Plates Approved *1 1/16 + 6 1/4*

„ „ in Boilers *1 1/16 + 1 1/4*

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 1/16*

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

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

No. of Rivets in a Pitch *5*

Diam. of Rivet Holes *1 1/8*

Pitch *4 13/16*

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 *2*

Are these Seams Hand or Machine riveted? *Back machine, front hand.*

Diam. of Rivet Holes *1 1/8*

Pitch *3 1/4*

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

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

Diam. of Rivet Holes *1 1/8*

Pitch *3 1/4*

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

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



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Thickness of End Plates in Steam Space Approved $1\frac{1}{2}"$

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

Pitch of Steam Space Stays $15" \times 15"$

Diar. " " " " Approved $2\frac{5}{8}"$ Threads per Inch 6

" " " " in Boilers $2\frac{5}{8}"$ 6

Material of " " " *steel.*

How are Stays Secured? *Double-nuts.*

Diar. and Thickness of Loose Washers on End Plates $\frac{1}{4}"$ *thick.*

" " Riveted " " " ✓

Width " " Doubling Strips " ✓

Thickness of Middle Back End Plates Approved ✓

" " " " in Boilers ✓

Thickness of Doublings in Wide Spaces between Fireboxes ✓

Pitch of Stays at " " " $15" \times 9"$

Diar. of Stays Approved $1\frac{7}{8}"$ Threads per Inch 9

" " in Boilers $1\frac{7}{8}"$ 9

Material " *steel.*

Are Stays fitted with Nuts outside? *yes.*

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

" " " " in Boilers $\frac{3}{4}"$

Pitch of Stays at Wide Spaces between Fireboxes $15" \times 9"$

Thickness of Doublings in " " $1"$

Thickness of Front End Plates at Bottom Approved $1"$

" " " " in Boilers $1"$

No. of Longitudinal Stays in Spaces between Furnaces 1

3-1 x 2-9 x 18

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

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

Pitch of Steam Space Stays $15" \times 15"$

Diar. " " " " Approved $2\frac{5}{8}"$ Threads per Inch 6

" " " " in Boilers $2\frac{5}{8}"$ 6

Material of " " " *steel.*

How are Stays Secured? *Double-nuts.*

Diar. and Thickness of Loose Washers on End Plates $\frac{1}{4}"$ *thick.*

" " Riveted " " " ✓

Width " " Doubling Strips " ✓

Thickness of Middle Back End Plates Approved ✓

" " " " in Boilers ✓

Thickness of Doublings in Wide Spaces between Fireboxes ✓

Pitch of Stays at " " " $15" \times 9"$

Diar. of Stays Approved $1\frac{7}{8}"$ Threads per Inch 9

" " in Boilers $1\frac{7}{8}"$ 9

Material " *steel.*

Are Stays fitted with Nuts outside? *yes.*

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

" " " " in Boilers $\frac{3}{4}"$

Pitch of Stays at Wide Spaces between Fireboxes $15" \times 9"$

Thickness of Doublings in " " $1"$

Thickness of Front End Plates at Bottom Approved $1"$

" " " " in Boilers $1"$

No. of Longitudinal Stays in Spaces between Furnaces 1

3-1 x 2-9 x 18



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Diar. of Stays Approved $3\frac{1}{4}"$ Threads per Inch 6
 " " in Boilers $3\frac{1}{4}"$ " 6
 Material " *steb.*

Thickness of Front Tube Plates Approved $1"$

" " " in Boilers $1"$

Pitch of Stay Tubes at Spaces between Stacks of Tubes $13\frac{1}{2}" \times 7\frac{1}{4}"$

Thickness of Doublings in " " "

" Stay Tubes at " " "

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 $9\frac{3}{8}" \times 7\frac{1}{4}"$

" Plain "

Thickness of Stay Tubes $3\frac{3}{4}" \times 3\frac{5}{8}"$

" Plain "

External Diar. of Tubes $2\frac{1}{2}"$

Material " *ion.*

Thickness of Furnace Plates Approved $19/32"$

" " " in Boilers $19/32"$

Smallest outside Diar. of Furnaces $3-6\frac{3}{16}"$

Length between Tube Plates $7'-7"$

Width of Combustion Chambers (Front to Back) $2'-8"$

Thickness of " " Tops Approved $2\frac{3}{32}"$

" " " in Boilers $2\frac{3}{32}"$

Pitch of Screwed Stays in C.O. Tops $9\frac{3}{8}" \times 9"$

Diar. of Screwed Stays Approved $3\frac{1}{4}"$ Threads per Inch $6\frac{1}{4}"$
 " " in Boilers $3\frac{1}{4}"$ " $6\frac{1}{4}"$
 Material " *steb.*

Thickness of Combustion Chamber Sides Approved $2\frac{3}{32}"$
 " " in Boilers $2\frac{3}{32}"$
 Pitch of Screwed Stays in C.O. Sides $9\frac{3}{8}" \times 7\frac{1}{4}"$
 Diar. " Approved $3\frac{1}{4}"$ Threads per Inch $6\frac{1}{4}"$
 " " in Boilers $3\frac{1}{4}"$ " $6\frac{1}{4}"$
 Material " *steb.*

Thickness of Combustion Chamber Back Approved $2\frac{3}{32}"$
 " " in Boilers $2\frac{3}{32}"$
 Pitch of Screwed Stays in C.O. Back $9\frac{3}{8}" \times 7\frac{1}{4}"$
 Diar. " Approved $3\frac{1}{4}"$ Threads per Inch $6\frac{1}{4}"$
 " " in Boilers $3\frac{1}{4}"$ " $6\frac{1}{4}"$
 Material " *steb.*

Are all Screwed Stays fitted with Nuts in C.O.? *yes.*
 Thickness of Combustion Chamber Bottoms $2\frac{3}{32}"$
 " " in Boilers $2\frac{3}{32}"$
 Pitch of Stays over each Wing Chamber $9\frac{3}{8}" \times 7\frac{1}{4}"$
 " " " $9\frac{3}{8}" \times 7\frac{1}{4}"$
 Centre " " $9\frac{3}{8}" \times 7\frac{1}{4}"$

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

Thickness of Combustion Chamber Sides Approved $2\frac{3}{32}$ "
 " " " in Boilers $2\frac{3}{32}$ "
 Pitch of Screwed Stays in C.C. Sides $9\frac{3}{8}" \times 9"$
 Diar. " " Approved $1\frac{3}{4}$ " Threads per Inch 9
 " " " in Boilers $1\frac{3}{4}$ " 9
 Material " " *stub.*

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

Are all Screwed Stays fitted with Nuts inside C.O.? *yes.*
 Thickness of Combustion Chamber Bottoms $\frac{7}{8}"$

No. of Girders over each Wing Chamber 4
 " " " Centre " $8\frac{1}{2}" \times 1\frac{1}{2}"$
 Depth and Thickness of Girders *stub.*
 Material of Girders 2
 No. of Stays in each

No. of Tubes, each Boiler 246
 Size of Lower Manholes $16" \times 12"$

VERTICAL DONKEY BOILERS

No. of Boilers
 Type
 Greatest Int. Diam.
 Height of Boiler Crown above Fire Grate
 Are Boiler Crown Flat or Dished?
 Internal Radius of Dished Ends
 Thickness of Plates
 Description of Seams in Boiler Crown
 Diam. of Rivet Heads
 Pitch
 Height of Firebox Crown above Fire Grate
 Are Firebox Crown Flat or Dished?
 External Radius of Dished Crown
 Thickness of Plates
 Material
 Diam.
 No. of Crown Stays
 External Diam. of Firebox at Top
 Thickness of Plates
 No. of Water Tubes
 Material of Water Tubes
 Size of Manhole in Shell
 Dimensions of Connecting Ring
 Heating Surface, each Boiler
 Gross Surface

SUPERHEATERS

Description of Superheaters

How situated?

Which Boilers are connected to Superheaters?
 Can Superheaters be shut off while Boilers are working?

No. of Safety Valves on each Superheater

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Pressure on Valves

Date when Rated? When not

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, Welded or Seamed

Internal Diar.

Thickness

How are Pipes secured?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Radius, Welded or Seamed

Internal Diar.

Thickness

How are Pipes 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

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

1
copper.
S. D.
4
nos L.S.G.
braked.
7-3-26
400 lbs.

EVAPORATORS.

One 6' x 4' x 6' supply chamber
Service chamber of hot steam

One 4' x 6' x 6' single cylinder
pump. Westinghouse make

FEED WATER HEATERS.

FEED WATER FILTERS.



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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.	Type
✓	
Makers	
Working Pressure	Test Pressure
Date of Test	

FEED WATER FILTERS.

No.	Type	Size
✓		
Makers		
Working Pressure	Test Pressure	Date of Test

LIST OF DONKEY PUMPS

One 6" x 4 1/2" x 6" Duplex General
Service Donkey by Thos. Camont.

One 4 1/2" x 6" x 6" single cylind whale air
pump, Westinghouse make.



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SPARE GEAR

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	
" Coupling Bolts	4	" Main Bearing Bolts	2	" Valve Chest "	
" Junk Ring Bolts	6	" Feed Pump Valves	4	" Bilge Pump Valves	4
" H.P. Piston Rings		" I.P. Piston Rings		" L.P. Piston Rings	
" " Springs		" " Springs		" " Springs	1
" Safety Valve "	2	" Fire Bars	2 1/2 ft / 1 piece	" Feed Check Valves	2
" Piston Rods		" Connecting Rods		" Valve Spindles	
" Air Pump Rods		" Air Pump Buckets	-	" Air Pump Valves	5
" Cir. "		" Cir. "	-	" Cir. "	
" Crank Shafts		" Crank Pin Bushes	-	" Crosshead Bushes	
" Propeller Shafts	1	" Propellers	1	" Propeller Blades	
" Boiler Tubes	6	" Condenser Tubes	15	" Condenser Ferrules	30

OTHER ARTICLES OF SPARE GEAR:—

Fire bar Pattern.
 One set Donkey Pump Valves.
 2 Manhole door joints.
 6 C.C. Stays & Nuts.
 * 2 spare Propeller Shafts for three Vessels.
 One set of air distribution Valves for
 One forced draught Furnace front.
 One set mica plates for ash pit doors.
 One piston rod gland.
 One Valve rod gland.
 6 Diaphragms for reducing valves.
 For Fun Engine. Main, top & bot End bearings with
 bolts & nuts. Eccentric shear & strap complete.
 Piston & slide rod. One piston & two sets
 of rings.

6 gauge glasses & 12 India rubber rings for same.



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REFRIGERATORS.

No. of Machines Capacity of each
 Makers
 Description
 No. of Steam Cylinders, each Machine No. of Compressors No. of Cranks
 Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines
 or Independently

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.
Engine Room	57.0	5.1	4/0.36	3.99
Refrigeration	34.0	3.4	4/0.36	3.99
Articles of Spare Gear for Refrigerating Plant carried on board:—				



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ELECTRIC LIGHTING.

Installation Fitted by

R. Pickercroft Lons.

No. and Description of Dynamos

One compound wound.

Makers of Dynamos

Cumberland Forge & Eng Co.

Capacity

50

Amperes, at

110

Volts,

340

Revolts. per Min.

Current Alternating or Continuous

Continuous.

Single or Double Wire System

Double.

Position of Dynamos

Starting platform.

Main Switch Board

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

4.

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.
<i>Forward 17</i>	<i>17</i>	<i>570</i>	<i>5.1</i>	<i>7/036</i>	<i>3.199</i>	<i>100%</i>	<i>900000.</i>
<i>Quilships</i>							
<i>Engine Room</i>	<i>19</i>	<i>540</i>	<i>5.7</i>	<i>7/036</i>			
<i>1 aft.</i>							
<i>Navigation</i>	<i>8</i>	<i>340</i>	<i>3.4</i>	<i>7/036</i>			
<i>Chart Room.</i>							
<i>Searchlight</i>	<i>1</i>		<i>25.0</i>	<i>7/044</i>	<i>1.389</i>		

Total No. of Lights

35

No. of Motors driving Fans, &c.

No. of Heaters

Current required for Motors and Heaters

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

Installation fitted by
No. and Description of Dynamos
Stakes of Dynamos
Capacity
Current Alternating or Continuous
Single or Double Wire System
Position of Dynamos
Main Switch Board
No. of Circuits to which Switches are provided on Main Switch Board

Particulars of these Circuits:-	Current	Number of Wires	Capacity	Current Rating	Size of Conductor	Current Rating	Conductivity	Insulation
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Are Out-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

On Aux. " " each Auxillary 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. 11.024 S.W.G., Largest, No. 19.024 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

Are all Joints in Cables properly soldered and thoroughly insulated so that the efficiency of the Cables

is unimpaired? *none.*

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?

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

Duration of Trial

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

Remarks

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

Is the Workmanship throughout thoroughly satisfactory?

Approved by the Committee for the

Date of Report

Date of Trial

Date of Report

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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? *ylo.*

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

Surveyor.

Are the Materials used in the Construction of Engines and Boilers, so far as could be seen, sound and trustworthy? *ylo.*

Is the Workmanship throughout thoroughly satisfactory? *ylo.*

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

as ascertained by ^{me} from personal examination

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

Fees—

MAIN BOILERS.

		£	s.	d.
H.S.	1509	Sq. ft.	:	:
G.S.	40	"	:	:

DONKEY BOILERS.

H.S.	Sq. ft.	:	:
G.S.	"	:	:
	£	:	:

ENGINES.

L.P.C.	12.7	Cub. ft.	:	:
		£	:	:
sting, &c.			:	:
		£	:	:
enses			:	:
			:	:
Total ...	£		:	:

It is submitted that this Report be approved,

W. Green King
Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the 2nd June 1926

Fees advised

Fees paid



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Secretary.



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