

No. 1026

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 981 No. in Register Book 1548.

S.S. CITY OF DUNKIRK

Makers of Engines BARCLAY CURLE & CO

Works No. 499

Makers of Main Boilers BARCLAY CURLE & CO

Works No. 499

Makers of ^{Aux}~~Donkey~~ Boiler BARCLAY CURLE & CO

Works No. 499

MACHINERY.



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012907-012924-0084

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No.

THE BRITISH CORPORATION FOR THE SURVEY

AND

REGISTRY OF SHIPPING.

Report No. 981 No. in Register Book 1548

Received at Head Office 11/12/12

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the *Steel Screw Steamer*

"City of Dundee"

Port of Registry

Registered Owners

Surveyor's District

Glasgow

Date of Completion of Engines

24/10/12

" " " Main Boilers

and

" " " Donkey

Trial Run at

Dunfermline

Date

24/10/12

First Visit

1/5/12

Last Visit

24/10/12

Total Number of Visits

18



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ENGINES.

Made by

Bazley & Co

" at

Glasgow

Description

Triple Expansion

Works No.

499

No. of Cylinders, each Engine

3

Diars.

24 1/2 - 42 1/4 - 74"

Stroke

48"

Cub. feet in each L.P. Cylr.

Revs. per Min.

85

I.H.P.

3200

Pressure in I.P. Receiver at full Power

2nd I.P.

L.P.

Thickness of Metal in H.P. Cylr.

I.P.

"

"

" " " "

Liner

"

"

"

" " " "

Valve Chest

"

"

"

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

Yes

"

"

"

each Receiver?

Yes

Number of Bolts in H.P. Cylr. Cover

I.P.

2nd I.P.

L.P.

Eff. Diar.

"

"

"

"

"

"

Pitch

"

"

"

"

"

"

Type of H.P. Valves (Piston or Slide)

"

"

"

" Valve Gear

Diameter of Piston Rods (plain part)

1 1/4"

At Bottom of Thread

Makers

"

Material

J.S.

Diameter of Connecting Rods (smallest part)

1 1/4"

Material

Steel

Makers

"

"

Diar. of Crosshead Gudgeons

4"

Length of Bearing

8 1/2"

Material

FORG & STEEL

No. of Top End Bolts (each Rod)

4

Effective Diar.

23 1/4"

Material

Steel

" Bot. "

2

"

4"

"

" Main Bearings

6

Lengths

15 1/2"

" Bolts in each

2

Effective Diar.

3 1/8"

Material

Steel

No. of Holding Down Bolts, each Engine

155

No. of Metal Checks

155

Eff. Diar. " " "

1 1/4"

Average Pitch

Are the Engines bolted directly to the Tank Top?

Yes

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

Yes

Date of Test of Tank by Water Pressure with Holding Down Bolts in place

SKETCHES.

Designed H.P. 2400

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SKETCHES.

SHAFTING.

Are Crank Shafts Built? $4/10$. No. of Lengths in each 3. Angle of Cranks 120°
 Diar. of Crank Shafts by Rule 14.02 Actual $14 \frac{5}{16}$ Diar. in Way of Webs $14 \frac{5}{8}$
 Makers of "Burmester & Wain Material MILD IRON, STEEL
 Diar. of Crank Pins $14 \frac{5}{16}$ Diar. in Way of Web $14 \frac{5}{8}$
 Makers of " Material S. J. STEEL
 Width across Crank Webs at Centre of Shaft $26 \frac{1}{2}$ Thickness $9 \frac{1}{2}$
 " " " " Crank Pins $26 \frac{1}{2}$
 " " " " Narrowest part 19
 Makers of Crank Webs Beardmore Material S. J. STEEL
 Diar. or Breadth of Keys in Crank Webs Length 4
 " of Dowel Pins in Crank Pins $2 \frac{1}{4}$ Length 7 Screwed or Plain Plain
 No. of Bolts in each Coupling 6 Diar. at Mid Length $3 \frac{5}{8}$ Diar. of Pitch Circle $20 \frac{1}{2}$
 Material of Coupling Bolts Steel
 Crank Shafts Finished by Barclay Curle & Co.
 Greatest Distance from edge of Main Bearing to Crank Web
 Description of Thrust Blocks Horse Shoe Type
 Number " " Rings 7
 Diar. of Thrust Shafts by Rule 14.02 Actual (at bot. of Collars) $14 \frac{5}{16}$ Over Collars 23
 " " at Forward Coupling $14 \frac{5}{16}$ After Coupling $14 \frac{5}{16}$
 No. of Thrust Collars 4 Thickness $2 \frac{1}{4}$ Distance apart $4 \frac{3}{4}$
 Thrust Shafts Forged by Burmester & Wain Material S. J. STEEL
 " Finished by Barclay Curle & Co.
 Diar. of Intermediate Shafting by Rule 13.32 Actual $13 \frac{3}{16}$
 No. of Lengths, each Engine 6 No. of Tunnel Bearings 6
 Diar. of Bearings 14 Length 14 Distance apart

No. of Bolts, each Coupling *6* Diam. at Mid Length *3 5/8* Diam. of Pitch Circle *20 1/2*
Intermediate Shafts Forged by *A* Material *M. J. J.*
" Finished by *Barclay Curle*
Diam. of Propeller Shafts by Rule *10.54* Actual *10 8/8* At Couplings *14 5/16*
Are Propeller Shafts fitted with Continuous Brass Liners? *Yes*
Diam. over Liners *14 5/8* Length of After Bearings *2.8 x 5.02*
Of what Material are the After Bearings composed? *Signum Vela*
Distance from After Bearing in Stern Tube to nearest Tunnel Bearing *1-3*
Are the After Bearings lubricated with Oil or Sea Water? *Seawater*
What means are adopted to prevent Sea Water entering the Stern Tubes?
Propeller Shafts Forged by *Brunswick, Wain* Material *St*
" Finished by *Barclay Curle*
No. of Propellers *11* Diam. *18.0* Pitch *17.9*
" Blades, each Propeller *14* Fitted or Solid *Fitted*
Material of Blades *Brass* Boss *Cast Iron*
Surface, each Propeller *110 ft* Diam. of Propeller
Coefficient of Displacement of Vessel at 1/2 Moulded Depth *.443*

TURBINE ENGINES.

Type

No. of H.P. Turbines

No. of L.P. Turbines

No. of Astern „

How arranged

Revs. per Min.

Horse Power

Diar. of H.P. Turbine Drums

MATERIAL

THICKNESS OF METAL

Material of H.P. Turbine Casings

" "

Lengths of Blades in H.P. Turbines

No. of Rows of Blades of each Length

Pitch of „ „ „

Diar. of L.P. Turbine Drums

MATERIAL

THICKNESS OF METAL

Material of L.P. Turbine Casings

" "

Lengths of Blades in L.P. Turbines

No. of Rows of Blades of each Length

Pitch of „ „ „

Diar. of Astern Turbine Drums

MATERIAL

THICKNESS OF METAL

Material of Astern Turbine Casings

" "

Lengths of Blades in Astern Turbines

No. of Rows of Blades of each Length

Pitch of „ „ „

Diar. of Turbine Spindles

Length of Bearing

No. of Thrust Collars on each Spindle

Thickness

Distance apart

Diar. of Spindles at Bottom of Collars

Diar. over Collars

Spindles Forged by

Material

„ Finished by

SKETCHES.



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SKETCHES. 9

Can one Trump be overwhelmed while the others are at work?

Are all large sections filled with roses?

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PUMPS, ETC.

PUMPS, ETC.

No. of Air Pumps 1 1/2 Diar. 2 Stroke 24 1/2
Type of „ EDWARDS
Diar. of Air Pump Rod 3 1/2 Material Manganese Bronze
How are Air Pumps Worked ? Drivers off & head
No. of Centrifugal Circulating Pumps 1 Maker W. Hallam & Co
„ Reciprocating „ „ ✓ Diar. ✓ Stroke ✓
Diar. of Circulating Pump Rods Material ✓
How are Circulating Pumps Worked ? Independent Eng.
Diar. of Circulating Pump Suction from Sea 12"
Has each Circulating Pump a Bilge Suction with Non-return Valve ? Yes Diar. 6"
No. of Feed Pumps on each Engine None Diar. — Stroke ✓
Where do they pump from ? ✓
„ „ discharge to ? ✓
Are Spring-loaded Relief Valves fitted to each Pump ? ✓
Can one Pump be overhauled while the others are at work ? ✓
No. of Bilge Pumps on each Engine 2 Diar. 14" Stroke 24 1/2
Where do they pump from ? Bilge & Sea
„ „ discharge to ? Sea
Can one Pump be overhauled while the others are at work ? Yes
No. of Bilge Injections connected to Condensers ✓ Diar. ✓
Are all Bilge Suctions fitted with Roses ? Yes
Are the Valves, Cocks, and Pipes so arranged as to prevent unintentional connection between Sea and Bilges ? Yes

Are all Sea Connections made with Valves or Cocks fitted direct to the Hull Plating ? *yes*

Are they placed so as to be easily seen and accessible ? *yes*

Are the Discharge Chests placed above the Deep Load Line ? *yes*

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*

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BOILERS.

Boilers made by

Barclay Curle & Co.
Glasgow.

" at

Works No.

499 3/2/12

Date when Plan approved

Stub.

Boiler Plates, Iron or Steel

Makers of Shell Plates

W. Beardmore & Co.

" Internal Plates

do

" Furnaces

D. Colvill & Son.

" Stay Bars

Stub Co. Scotland

" Rivets

Material tested by (B.C., B.T., etc.)

B.C. B.T.

No. of Boilers

2

Single or Double-ended

Single

No. of Furnaces, each Boiler

4

Type of Furnaces

Deighton

Approved Working Pressure

220 lbs/sq

Hydraulic Test Pressure

440

Date of Hydraulic Test

12/12/9/12

12/19/9/12

" when Safety Valves set

17/10/12

Pressure on Valves

228

Date of Steam Accumulation Test

✓

Max. Pressure under Accumulation Test

✓

System of Draught

Howduns. C.A.

Can Boilers be worked separately?

Yes

Greatest inside Diam. of Boilers

16' 0"

" " Length "

12' 3"

Square Feet of Heating Surface, each Boiler

2880

" Grate " " "

73.3

Auxiliary Boiler.

Barclay Curle & Co.

Glasgow.

499

5/2/12

Stub.

W. Beardmore & Co.

do

D. Colvill & Son.

Stub Co. Scotland

B.C. & B.O.D.

Single

Deighton

220 lbs/sq

440

12/19/12

17/10/12

228

Howduns. C.A.

Yes

13' 6"

12' 3"

1614

313.6



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No. of Safety Valves, each Boiler

Diar. " " "

Area " " "

Are the Valves fitted with Easing Gear?

No. of Pressure Gauges, each Boiler

" Water " "

" Test Cocks, " "

" Salinometer Cocks, " "

Are Water Gauge Pillars attached by Pipes to Steam and Water Spaces?

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 by Rule

" " Approved

" " in Boilers

Are the Rivet Holes Punched or Drilled?

Are Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

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?

Diar. of Rivet Holes

Pitch " "

Width of Overlap

Percentage of Strength in Longitudinal Seams

3 1/2"

yrs.

nl.

nl.

3

"

yrs.

nl.

yrs.

These boilers are to those
of J.S. Melford Steel

3" auxiliary

2.

3 1/2"

"

yrs.

nl.

nl.

3

"

yrs.

nl.

yrs.

"

1

2

21.5

21.75

1/16

Drilled

Steel.

Butt.

yrs.

1/16

"

Machine.

nl.

1.375

9 1/2

10

8 1/2



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No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes

Pitch

Width of Overlap

No. of Rows of Rivets in End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes

Pitch

Width of Overlap

Size of Manholes in Shell

Dimensions of Compensating Rings

Thickness of End Plates in Steam Space by Rule

" " " " Approved

" " " " in Boilers

Pitch of Steam Space Stays

Eff. Diar. " " " by Rule

" " " " Approved

" " " " in Boilers

Material of " " "

How are Stays Secured?

Diar. and Thickness of Loose Washers on End Plates

" " Riveted " " "

Width " " Doubling Strips " "

Thickness of Middle Back End Plate by Rule

" " " " Approved

" " " " in Boilers

Thickness of Doubling in the Space between Fireboxes

Pitch of Stays in

Eff. Diar. of Stays by Rule

Approved

in Boilers

Material

1 machine - 1 hand

1.345

3.845

4 5/16

16x12

3' 1 1/2 x 2' 9"

Thickness of Doubling in

20/16

Thickness of Front End Plates at Bottom by Rule

Approved

in Boilers

No. of Long Stays in the Space between Fireboxes

Eff. Diar. " " " by Rule

Approved

in Boilers

Material of

Stitch

Double nuts

Thickness of Front End Plates by Rule

Approved

in Boilers

Thickness of Doubling in

in Boilers



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Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at " " " "

Eff. Diar. of Stays by Rule

" " " Approved

" " " in Boilers

Material "

Are Stays fitted with Nuts outside?

Thickness of Back End Plates at Bottom by Rule

" " " " Approved

" " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom by Rule

" " " " Approved

" " " " in Boilers

No. of Long Stays in Spaces between Furnaces

Eff. Diar. of Stays by Rule

" " " " Approved

" " " " in Boilers

Material of "

Thickness of Front Tube Plates by Rule

" " " " Approved

" " " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

Thickness of Doublings in " " "

" Stay Tubes at " " "

$$13\frac{7}{8} \times 7\frac{3}{4}$$

$$1.585$$

$$1.733$$

$$14.38$$

$$15.16$$

$$13.875 \times 7.75$$

$$14.1$$

$$14.5$$

$$14.1$$

$$14.5$$

$$14.1$$

$$14.5$$

$$14.1$$

$$14.5$$

$$14.1$$

$$14.5$$

$$14.1$$

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$$14.1$$

$$14.5$$

$$14.1$$

$$14.5$$

$$14.1$$

$$14.5$$



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Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back Tube Plates by Rule

" " " Approved

" " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" Plain "

Thickness of Stay Tubes

" Plain "

External Diam. of Tubes

Material " "

Thickness of Furnace Plates by Rule

" " " Approved

" " " in Boilers

Smallest outside Diam. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of " " Tops, by Rule

" " " " Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Tops

Eff. Diam. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides by Rule

22 with nuts 29 with out.

10.9
16

13/16

5/8, 3/8, 5/16 9 3/8 x 7 1/2
8 1/2 x 8 3/4 x 3 3/4

1/2, 3/8, 5/16

8 W. S.

2 1/2

Iron

9.63
16

9.75
16

40 1/4"

8 - 1/4"

2 - 9 1/4"

10.5
16

10.5
16

8 x 8 1/4

1.475

1.483

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Thickness of Combustion Chamber Sides Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs by Rule

" " " Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Backs

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

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

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

" " " Centre "

Depth and Thickness of Girders

Material of Girders

No. of Stays in each

No. of Stay Tubes, each Boiler

" " Plain " "

Size of Lower Manholes

~~10.5~~
10

~~7 3/4 x 8 1/2~~

~~1.47~~

~~1.483~~

~~Steel~~

VERTICAL DONKEY BOILERS.

~~10.5~~
10

~~7 3/4 x 8 1/2~~

~~1.47~~

~~1.483~~

~~Steel~~

~~10.5~~

~~10.5~~

~~10.5~~

~~8 1/2 x 7 3/4~~

~~1.47~~

~~1.483~~

~~Steel~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~

~~10.5~~



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VERTICAL DONKEY BOILERS.

If the Donkey Boilers are Vertical the following particulars should be stated in addition to those on previous Pages applicable to such Boilers:—

Type of Boilers

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

Effective Diar.

Material

External Diar. of Firebox at Top

Bottom

Thickness of Plates

No. of Water Tubes

Int. Diar.

" "

Material of Water Tubes

No. of Screwed Stays in Firebox Sides

Eff. Diar.

Material

Are they fitted with Nuts Inside?

Outside?

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 Superheaters.

Diar.

Area

Are " " fitted with Easing Gear?

Date of Hydraulic Test

Test Pressure

Date when Safety Valves set

Pressure on Valves

SKETCHES.

No. of Tubes	Material	Internal Diar.	Thickness	How are Flanges Secured?	Date of Hydraulic Test	Test Pressure
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100
3.2	W. 3.	2 1/2	0.125	Welded	10/11/11	100

REFRIGERATORS.

No. of Machines	Description	Total (Gross Capacity of Refrigerated Space)	Material of Refrigerated Space	Material of Refrigerant	Time required to cool or freeze	Remarks
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.
1	W. 3.	100	W. 3.	W. 3.	10	W. 3.



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MAIN STEAM PIPES.

No. of Lengths	2	1		
Material	W.I.	W.I.		
Brazed, Welded, or Seamless	S.W.	S.W.		
Internal Diar.	5 7/8	4 7/8		
Thickness	5/16	5/16		
How are Flanges Secured?	Secured	Secured		
Date of Hydraulic Test	16/9/14.	16/9/14.		
Test Pressure	660	660.		

REFRIGERATORS.

No. of Machines Makers

Description

When any part of the Vessel is to be used for the Carriage of Refrigerated Cargo the following particulars should be stated:—

Total Cubic Capacity of Refrigerated Spaces

Nature, Construction, Thickness, &c., of Insulation

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

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

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

Are Sluice Valves fitted on any of the Bulkheads of Insulated Spaces?

Are these fitted with Brass Non-return Valves?

Are they always accessible?

Are the Bilges and Bilge Rose Boxes always accessible?

Are the Steam Suctions to Bilges fitted with Non-return Valves?

Is the Machine Room effectively separated from Insulated Spaces?

" " properly Ventilated and Drained?

No. of Steam Cylinders, each Machine

Diars.

" Compressors, "

Diar. of Crank Shafts

No. of Cranks

Give particulars of Pumps in connection with Refrigerating Plant, and state whether worked by

Refrigerating Machines or independently

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

Particulars of these Circuits:

No. of Circuit	Name of Circuit	Number of Lights	Capacity (Horse Power)	Capacity (Horse Power)	Capacity (Horse Power)	Capacity (Horse Power)	Capacity (Horse Power)	Capacity (Horse Power)
1	Rev.	14	16	8.4	7/8	640	100%	600
2	Salon	18	16	10.8	1	400		
3	Rev.	14	16	8.4	7/8	640	100%	600
4	Salon	18	16	10.8	1	400		
5	Rev.	14	16	8.4	7/8	640	100%	600
6	Salon	18	16	10.8	1	400		
7	Rev.	14	16	8.4	7/8	640	100%	600
8	Salon	18	16	10.8	1	400		
9	Rev.	14	16	8.4	7/8	640	100%	600
10	Salon	18	16	10.8	1	400		

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

Date of Test under Working Conditions

Fall of Temperature in Insulated Spaces

Time required to obtain this Result

Articles of Spare Gear for Refrigerating Plant carried on board



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SKETCHES.

ELECTRIC LIGHTING.

Installation Fitted by

Arch Watson & Co

No. and Description of Dynamos

1-9-75 Direct Compled

Makers of Dynamos

Clark Chapman & Co L

Capacity

94.5 Amperes, at 100 Volts. 300 Revols. per Min.

Current Alternating or Continuous

Continuous

Position of Dynamos

Starting platform

Main Switch Board

do

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

8

Particulars of these Circuits:—

No. of Circuit.	Name of Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
1	Nav.	14	16	8.4	7/18	6700 ap ²	100%	600/1000
2	Saloon	18	16	10.8	"	900	"	"
3	Cabin	19	16	11.4	"	920	"	"
4	Cargo	36	16	21.6	7/16	980	"	"
5	Aft	12	16	4	7/20	1000	"	"
6	E.R.	21	16	12.5	7/18	"	"	"
7	Aft. ac	1	-	12.0	"	960	"	"
8	Induc	1	-	12.0	"	"	"	"

Total No. of Lights 122

No. of Motors driving Fans, &c.

No. of Heaters

Current required for Motors and Heaters

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

*1 board in
whulhouse with 6 switches for Nav. lights
& telegraphs. 1 board in Engine Room
with 6 switches for E. Room, stokehold
& Mmel.*

No. of Circuits	Name of Circuit	Number of Lamps	Capacity Power	Current Rating Amps	Size of Conductor	Position of Switch Board	Position of Conductor	Position of Conductor	Position of Conductor
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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? *Yes on switch board 50 amp, 500 50*Are all Switches and Cut-outs constructed of Non-inflammable Material? *Yes*Are they placed so as to be always and easily accessible? *Yes*Smallest Single Wire used, No. *1/8* S.W.G., Largest, No. *3/16* S.W.G.How are Conductors in Engine and Boiler Spaces protected? *Lead covered & armoured*" " Saloons, State Rooms, &c., " ? *Lead covered*

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp *Lead covering & armoured*

(2) " passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads *Fibre tubes & w.d. glands*

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? *2 meg*Is the Installation supplied with a Voltmeter? *Yes*" " " an Ampere Meter? *Yes*Date of Trial of complete Installation *24/10/12*Duration of Trial *6 hours*

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EVAPORATORS.

No. Type Tons per Day **20**
 Makers **Hocking**
 Working Pressure **15** Test Pressure **30** Date of Test
 Date of Test of Safety Valves under Steam **24/10/2**

FEED WATER HEATERS.

No. Type **23**
 Makers **G & J Weir**
 Working Pressure Test Pressure Date of Test

Ind **Harbor I.O.** **DONKEY** **Ballast**
 No. of Donkeys **1**
 Type **Vertical**
 Makers **Weir** **Duncan & Brown**
 Single or Duplex **Duplex** **Simplex** **Duplex**
 " Double-Acting **O.A.** **O.A.** **O.A.**
 Diar. of Steam Cylinders **10 1/2** **6** **10**
 " Pumps **8** **14** **10**
 Stroke of " **21** **8** **10**
 Where do they pump from? **Heater** **sea** **Tanks & ca**
Fills **air line** **bilges**
Tanks & ca **Tanks**
Condensers
 Where do they discharge to? **Heater** **Boilers** **overboard**
Boilers **Tanks** **deck**
Condensers

Capacity, Tons per Hour of Ballast Donkey

Diar. of Pipe required by Rule for

FEED WATER FILTERS.

No. Type **4 1/2 x 2 1/2**
 Makers **Hocking**
 Working Pressure Test Pressure Date of Test

FORCED DRAUGHT FANS.

No. of Fans. Diar. **8 1/2** Revols. per min.
 How are Fans driven?

PUMPS.

Gen lrs
 do
Duplex
O.A.
10
66
10
Tanks & ca
Can: bilges

overboard deck
Condensers **boilers**

largest Ballast Tank

Velocity of Water in Pipe

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SPARE GEAR.

No. of Top End Bolts	No. of Bot. End Bolts
Main Bearing Bolts	Coupling Bolts
Cylr. Cover Bolts Studs	Valve Chest Cover Bolts Studs
Feed Pump Valves	Bilge Pump Valves
Safety Valve Springs	Fire Bars
Piston Rings	Junk Ring Bolts Studs
Piston Rods	Connecting Rods
Valve Spindles	Air Pump
Air Pump Valves	" " " Buckets
Crank Pin Bushes	Crosshead Bushes
Crank Shafts	Propeller Shafts
Propellers	" " Blades
Boiler Tubes	Condenser Tubes

OTHER ARTICLES OF SPARE GEAR:—

GENERAL CONSTRUCTION.

Have all the Requirements under Sections 31 and 32 of the Rules been complied with?

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

Surveyor

Are the Steam Pumping Arrangements in accordance with the approved Plan?

If not, state in what respects they differ and when such differences 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?

Is the Workmanship throughout thoroughly satisfactory?

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

as ascertained by ^{us} ~~me~~ from personal examination

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

Fees—

MAIN BOILERS. Have all the requirements under Part II of the Rules been complied with?

H.S. 4344 Sq. ft. 22 : 10 : 0

G.S. : : :

DONKEY BOILERS.

H.S. Sq. ft. : : :

G.S. : : :

£ : : :

ENGINES.

L.P.C. 119.5 Cub. ft. 22 : 0 : 0

Testing, &c. ... : : :

£ : : :

Expenses ... : : :

Total ... £ 44 : 10 : 0

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 11th December 1912.

Fees applied for 28th Octr., 1912

Fees paid 25th Novr., 1912

Robert Williams
Secretary.



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MAIN DOLLAR

73 1/2 22-10-0

LUXURY DOLLAR

Sq. D.

TOTAL

119.5 22-0-0

Total

114 10-0

It is submitted that this Report be approved.

W. Green King
 Chief Accountant

Reported to the Committee for the Class of M.B.S.
 on the 11th December 1912.

Was applied to

28th Oct. 1912

Was paid

25th Nov. 1912

W. Green King
 Secretary



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