

No. 620

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 567 No. in Register Book 1090

S.S. POMARON

Makers of Engines *Richardsons Westgarth & Co*

Pa.

Works No. 331.

Makers of Main Boilers *Richardsons Westgarth & Co*

Works No. 331.

Makers of Donkey Boiler *Blake Boiler Co. Ltd.*

Works No. 3068.

MACHINERY.



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No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
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Report No. 567 No. in Register Book 1090

Received at Head Office

20 November 1907

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

"Pomaron"

Port of Registry

West Hartlepool

Registered Owners

Furness Withy & Co.

Surveyor's District

Wear & Tees

Date of Completion of Engines

10-07

" " " Main Boilers

10-07

" " " Donkey

10-07

Trial Run at

North Sea

Date 15-10-07

First Visit

19-6-07

Last Visit

15-10-07

Total Number of Visits

21

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ENGINES.

Made by *Richardsons Westgarth & Co. Ltd.*
 " at *Middlesbrough* Works No. *331*
 Description *Triple expansion, surface condensing, 3 cks.*
 No. of Cylinders, each Engine *3* Diars. *70½ - 33 - 54* Stroke *36*
 Cub. feet in each L.P. Cylr. *47.71* Revols. per Min. I.H.P.
 Pressure in I.P. Receiver at full Power 2nd I.P. L.P.
 Thickness of Metal in H. P. Cylr. *1½"* I.P. *1½"* " *✓* " *1½"*
 " " " " Liner *1½"* " *✓* " *✓* " *✓*
 " " " " Valve Chest *1½"* " *1½"* " *✓* " *1½"*
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cylr.? *I.P. & L.P.*
 " " " " each Receiver? *I.P. & L.P.*
 Number of ~~Studs~~ in H.P. Cylr. Cover *14* I.P. *16* 2nd I.P. *✓* L.P. *24*
 Eff. Diar. " " " *1.067* " *1.067* " *✓* " *1.067*
 Pitch " " " *5¾"* " *7¾"* " *✓* " *7¾"*
 Type of H.P. Valves (Piston or Slide) *Slide* " *Slide* " *✓* " *Slide*
 " Valve Gear *Stephensons link motion*
 Diameter of Piston Rods (plain part) *5"* At Bottom of Thread *4"*
 Makers " *A. W. & Co Hartlepool* Material *Iron*
 Diameter of Connecting Rods (smallest part) *4¾"* Material *Iron*
 Makers " *Richardsons Westgarth & Co Hartlepool.*
 Diar. of Crosshead Gudgeons *6½"* Length of Bearing *7½"* Material *Iron*
 No. of Top End Bolts (each Rod) *2* Effective Diar. *2.78"* Material *Steel*
 " Bot. " " *2* " *2.78"* " *Steel*
 " Main Bearings *6* Lengths *10½"*
 " Bolts in each *2* Effective Diar. *2.317* Material *Steel*

No. of Holding Down Bolts, each Engine *49* No. of Metal Chocks
 Eff. Diar. " " " *1.067* Average Pitch *14½"*
 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 *15-10-07*

SKETCHES.



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SHAFTING.

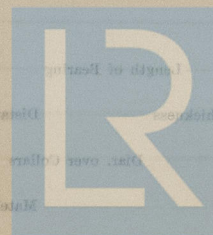
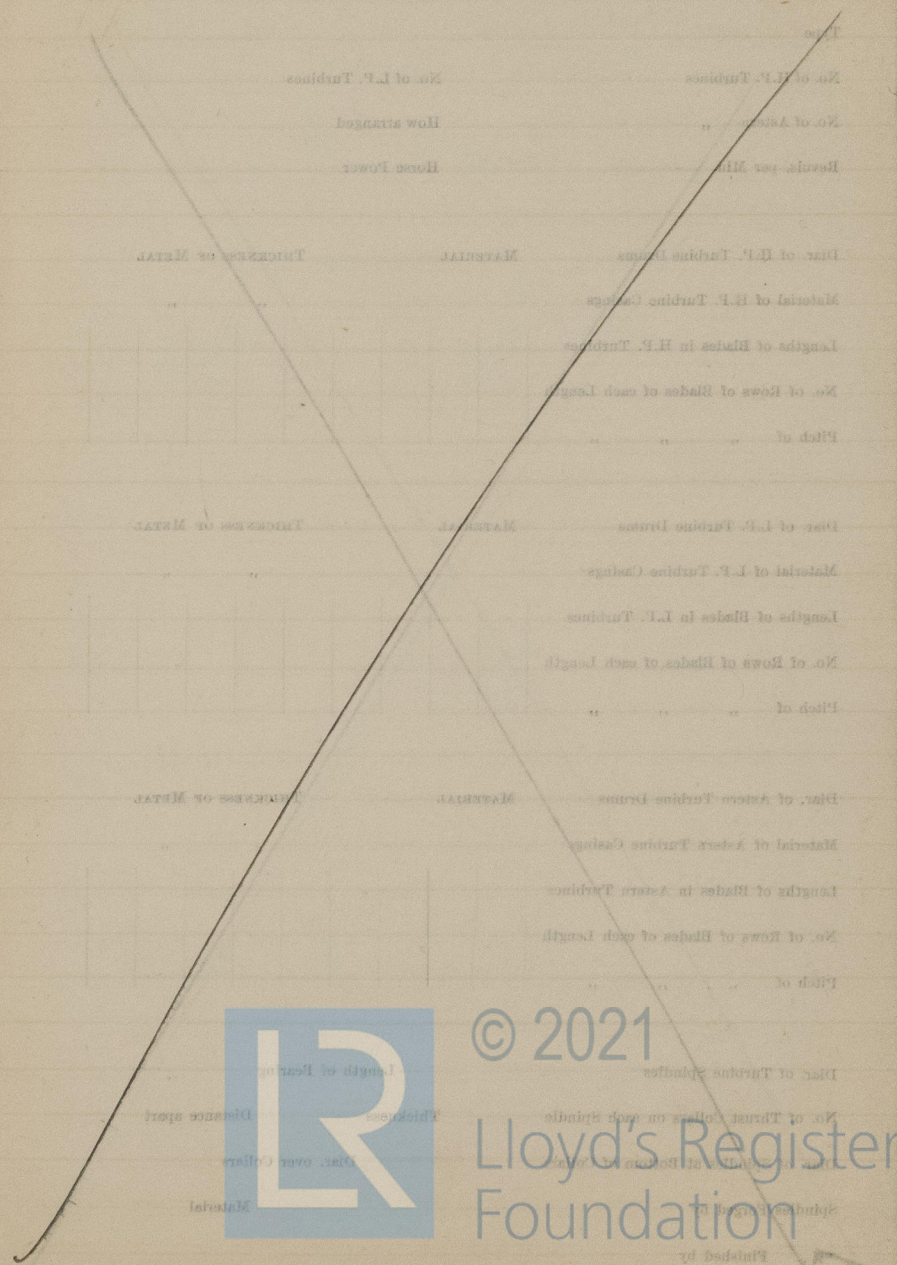
Are Crank Shafts Built? *Yes* No. of Lengths in each *3* Angle of Cranks *120°*
 Diar. of Crank Shafts by Rule *10.34"* Actual *10³/₄"* Diar. in Way of Webs *11¹/₄"*
 Makers of *" Daniel Rueg* Material *I.S.*
 Diar. of Crank Pins *10³/₄"* Diar. in Way of Web *10³/₄"*
 Makers of *" Daniel Rueg* Material *I.S.*
 Width across Crank Webs at Centie of Shaft *21¹/₂"* Thickness *7"*
 " " " " Crank Pins *21"* " *7"*
 " " " " Narrowest part *16"* " *7"*
 Makers of Crank Webs *Spencer Newburn* Material *I.S.*
 Diar. or Breadth of Keys in Crank Webs *2¹/₄"* diar Length *6"*
 " of Dowel Pins in Crank Pins *1¹/₂"* Length *6"* Crowded or Plain *Plain*
 No. of Bolts in each Coupling *6* Diar. at Mid Length *2⁵/₈"* Diar. of Pitch Circle *16"*
 Material of Coupling Bolts *Iron*
 Crank Shafts Finished by *R. W. & Co. Hartlepool.*
 Greatest Distance from edge of Main Bearing to Crank Web *✓*

Description of Thrust Blocks *Adjustable with M.M. screws.*
 Number *" 3* Rings

Diar. of Thrust Shafts by Rule *10.34"* Actual (at bot. of Collars) *10³/₄"* Over Collars *20¹/₂"*
 " " at Forward Coupling *10¹/₂"* After Coupling *10¹/₂"*
 No. of Thrust Collars *4* Thickness *2"* Distance apart *4"*
 Thrust Shafts Forged by *Gutterhoffnungshutte Co.* Material *Steel*
 " Finished by *R. W. & Co. Middlesbrough.*
 Diar. of Intermediate Shafting by Rule *9.823* Actual *10¹/₄"*
 No. of Lengths, each Engine *5* No. of Tunnel Bearings *4*
 Diar. of Bearings *10¹/₂"* Length *13* Distance apart *16-0*

No. of Bolts, each Coupling 6
 Intermediate Shafts Forged by Guttehoffnungshutte Co
 " " Finished by A. W. Ho Middlesbrough.
 Diar. of Propeller Shafts by Rule 11.68 Actual 12 $\frac{1}{4}$ " At Couplings 10 $\frac{7}{8}$ "
 Are Propeller Shafts fitted with Continuous Brass Liners? Yes
 Diar. over Liners 13 $\frac{1}{2}$ " Length of After Bearings 4'-2"
 Of what Material are the After Bearings composed? Brass Highum-vilas
 Distance from After Bearing in Stern Tube to nearest Tunnel Bearing abt 6'-0"
 Are the After Bearings lubricated with Oil or Sea Water? Sea water
 What means are adopted to prevent Sea Water entering the Stern Tubes? ✓
 Propeller Shafts Forged by Guttehoffnungshutte Co Material Steel
 " " Finished by A. W. Ho Middlesbrough.
 No. of Propellers one Diar. 14'-3" Pitch 15'-0" to 16'-0"
 " Blades, each Propeller 4 Fitted or Solid Solid
 Material of Blades Iron Boss Iron
 Surface, each Propeller 73 Diar. of Propeller Rule Diar. of Crank Shaft = 16.53
 Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth .79

TUBESHEATHS



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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

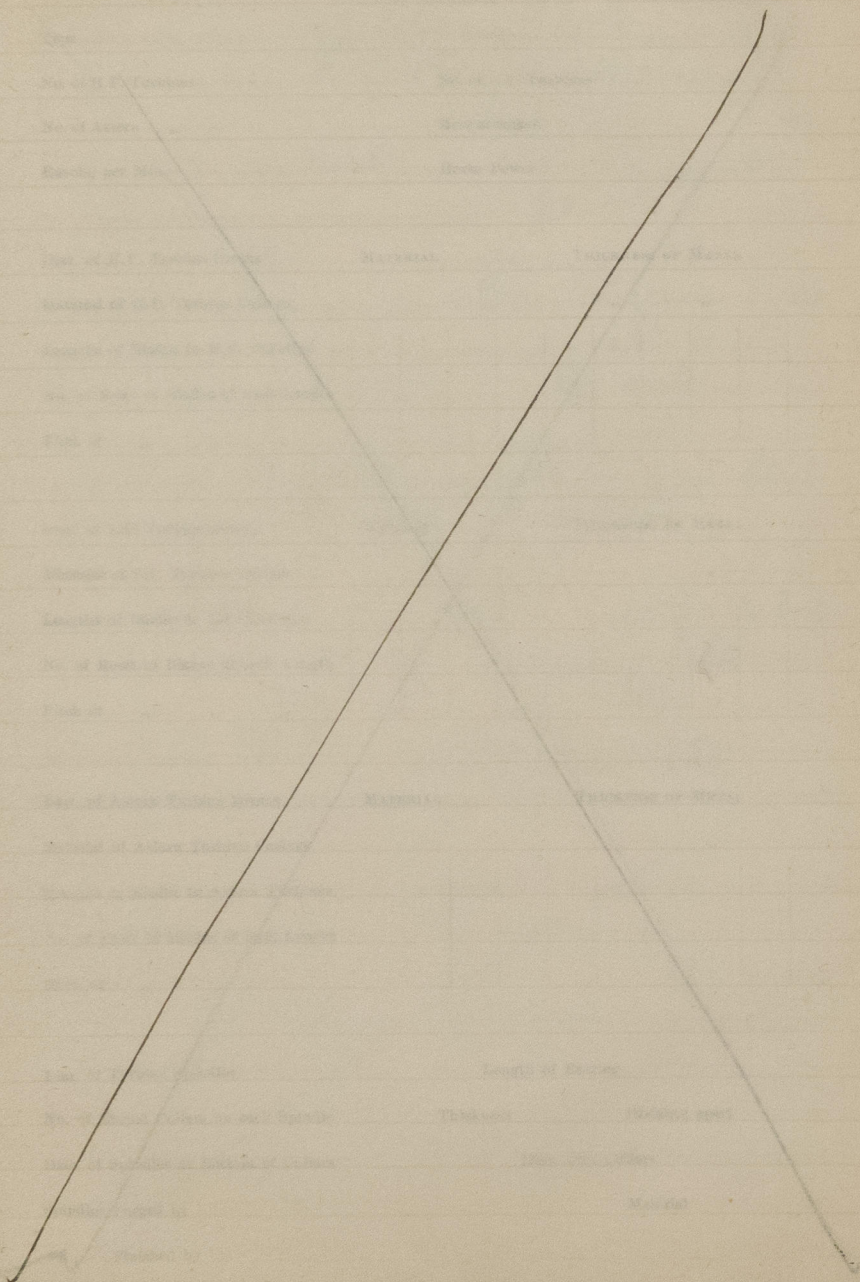
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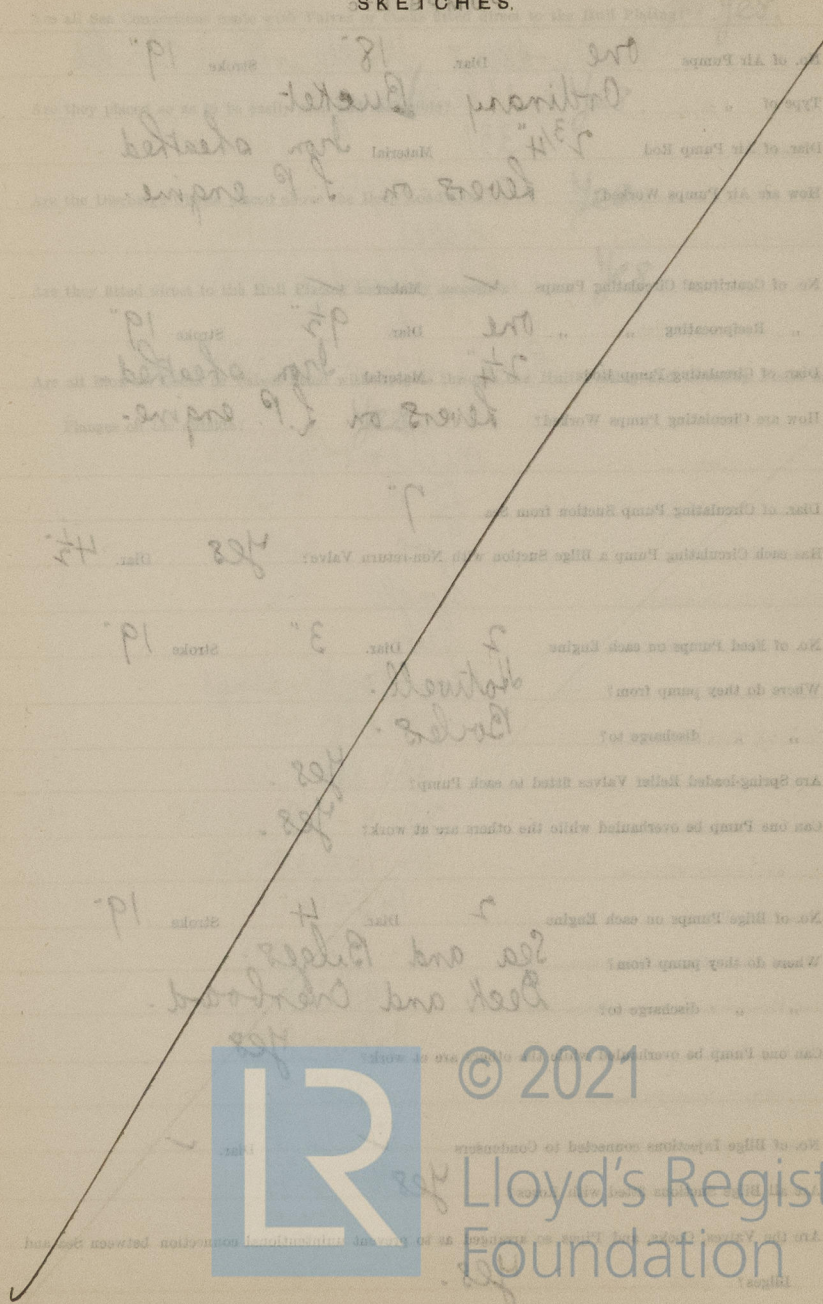
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PUMPS, ETC

No. of Air Pumps *one* Diar. *18"* Stroke *19"*
 Type of *Ordinary Bucket*
 Diar. of Air Pump Rod *2 3/4"* Material *Iron sheathed*
 How are Air Pumps Worked? *Levers on S.P. engine.*

No. of Centrifugal Circulating Pumps ☒ Maker ☒
 " Reciprocating " *one* Diar. *9 1/2"* Stroke *19"*
 Diar. of Circulating Pump Rods *2 1/4"* Material *Iron sheathed*
 How are Circulating Pumps Worked? *Levers on L.P. engine.*

Diar. of Circulating Pump Suction from Sea *7"*
 Has each Circulating Pump a Bilge Suction with Non-return Valve? *Yes* Diar. *4 1/2"*

No. of Feed Pumps on each Engine *2* Diar. *3"* Stroke *19"*
 Where do they pump from? *Hotwell.*
 " " discharge to? *Bilges.*
 Are Spring-loaded Relief Valves fitted to each Pump? *Yes.*
 Can one Pump be overhauled while the others are at work? *Yes.*

No. of Bilge Pumps on each Engine *2* Diar. *4"* Stroke *19"*
 Where do they pump from? *Sea and Bilges.*
 " " discharge to? *Deck and Overboard.*
 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.*

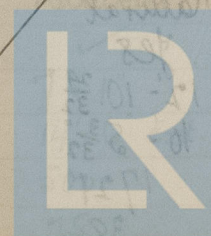
Are they placed so as to be easily seen and accessible? *Yes.*

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 *Richardsons Westgarth & Co Ltd*
 " at *Middlebrough*
 Works No. *331*
 Date when Plan approved *2-5-07*
 Boiler Plates, Iron or Steel *Steel*
 Makers of Shell Plates *Glydebridge*
 " Internal Plates *do*
 " Furnaces *Richardsons Westgarth*
 " Stay Bars *Coxsett.*
 " Rivets *Miller & Co.*
 Material tested by (B.C., B.T., etc.) *B.C.*
 No. of Boilers *Two*
 Single or Double-ended *Single*
 No. of Furnaces, each Boiler *Two*
 Type of Furnaces *Adamsons rings -*
 Approved Working Pressure *180 lbs*
 Hydraulic Test Pressure *360 lbs*
 Date of Hydraulic Test *25-9-07*
 " when Safety Valves set *11-10-07*
 Pressure on Valves *185 lbs*
 Date of Steam Accumulation Test *11-10-07*
 Max. Pressure under Accumulation Test *190 lbs*
 System of Draught *Natural*
 Can Boilers be worked separately? *Yes*
 Greatest inside Diam. of Boilers *12'-10 $\frac{29}{32}$ "*
 " " Length " *10'-5 $\frac{3}{32}$ "*
 Square Feet of Heating Surface, each Boiler *1721*
 " Grate " " *38*

- Donkey Boilers -
 Blake Boiler Wagon Eng. Co. Ltd
 Darlington
 3068
 18-6-07
 Steel
 Newburn
 do
 Blakes
 ✓
 Miller & Co.
 B.C.
 One
 ✓
 Vertical
 90 lbs
 180 lbs
 27-9-07
 11-10-07
 93 lbs
 11-10-07
 95 lbs
 Natural
 ✓
 7'-1"
 14'-6" ext.
 500
 25

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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

Two

2 1/2"

9.80"

yes

one

one

2 on boiler

one

no

yes

one

Two

17 1/16"

1 3/32"

1 3/32"

1 3/32"

Drilled

Steel

Butt

yes

15 1/16"

1 3/32"

machine

Treble

13 1/16"

8"

18" strap

85.16 % Plate 91.4 % Rivet

Two

yes

one

one on shell

Two do

no

no

yes

4

2 and 1

4.87"

16"

1/2"

1/2"

Drilled

Steel

Lap

yes

yes

yes

machine where possible

Double

15 1/16"

3"

4 5/8"

68.7 % Plate 88.4 % Rivet

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~~ Top and plate

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

Back - machine. Front. hand.

1 1/4"

3 1/2"

6 1/2"

16" x 12"

Plate flanged

18.2/16"

1 7/64"

1 7/64"

18" x 19"

2.6 and 2.75

2.787" and 3"

2.787" " 3"

Steel

Double nuts washers

9 1/2" x 3/4"

1 1/2" x 1"

14/16"

one machine where possible

15/16"

2 1/4"

2 7/8"

16" x 12"

28" x 24" x 5/8"

16" x 12"

28" x 24" x 5/8"

16" x 12"

28" x 24" x 5/8"

16" x 12"

28" x 24" x 5/8"

16" x 12"

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28" x 24" x 5/8"

16" x 12"

28" x 24" x 5/8"

16" x 12"

28" x 24" x 5/8"

16" x 12"

28" x 24" x 5/8"



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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

$$\frac{13.1}{16}$$

$$\frac{29}{32}$$

$$15 \times 8 \frac{1}{2}$$

$$\frac{13.4}{16}$$

$$\frac{29}{32}$$

$$\frac{29}{32}$$

$$2.92$$

$$2.317$$

$$2.317$$

$$\text{Steel}$$

$$\frac{14.5}{16}$$

$$\frac{29}{32}$$

$$\frac{29}{32}$$

$$14 \frac{1}{4} \times 9$$

$$\frac{3}{8}$$

Where approved

Thickness of Back Tube Plates by Rule

" " " " " Approved

" " " " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

" " " " " Plain

Thickness of Stay Tubes

" " " " " Plain

Eff. Diar. of Tubes

" " " " " Matched

Thickness of Furnace Plates by Rule

" " " " " Approved

" " " " " in Boilers

Thickness of Outside Plate of Furnaces

" " " " " Lengths between Tube Plates

Width of (connection) (front to back)

Thickness of

" " " " " Approved

" " " " " in Boilers

Pitch of Screwed Stays in G.C. Type

Eff. Diar. of Stays by Rule

" " " " " Approved

" " " " " in Boilers

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



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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

Where approved.

$$\frac{13.2}{16}$$

$$\frac{27}{32}$$

$$\frac{27}{32}$$

$$13\frac{1}{2} \times 9$$

$$4\frac{1}{2} \times 4\frac{1}{2}$$

$$\frac{5}{16}$$

$$8 \text{ m. G.}$$

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

Iron, lap welded.

$$\frac{11.9}{16}$$

$$\frac{49}{64}$$

$$\frac{49}{64}$$

$$46\frac{1}{4}$$

$$7\frac{1}{2} - 3$$

$$2\frac{1}{2} - 4\frac{3}{16}$$

$$\frac{11}{16}$$

$$\frac{11}{16}$$

$$\frac{11}{16}$$

$$10\frac{1}{2} \times 8$$

$$1.5$$

$$1.6335$$

$$1.6335$$

$$\text{Steel}$$

$$\frac{10.7}{16}$$

Thickness of Combustion Chamber Sides Approved

" " " in Boilers

Pitch of screw stays in C.C. plates

Eff. Diam. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs by Rule

" " " Approved

" " " in Boilers

Pitch of screw stays in C.C. plates

Eff. Diam. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Are all screw 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

Size of lower Manholes



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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

$\frac{11}{16}$ "
 $\frac{11}{16}$ "
 $10" \times 8"$
 $1-46$
 $1-6335$
 $1-6335$
 Steel.

$\frac{10-9}{16}$ "
 $\frac{11}{16}$ "
 $\frac{11}{16}$ "
 $10" \times 8\frac{1}{2}"$
 $1-5$
 $1-6335$
 $1-6335$
 Steel

Yes
 $\frac{15}{16}$ "

5

2 @ $7\frac{3}{4} \times \frac{7}{8}$
 Steel
 Two

60

734

 $16" \times 12"$

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 Boiler

Height of Boiler Crown above the Grate

Are Boiler Crown Flat or Dished?

Internal Radius of Dished Ends

Description of Stays in Boiler Crown

Dish of Boiler Bores

Height of Pinch Crown above the Grate

Are Pinch Crown Flat or Dished?

Internal Radius of Dished Crown

No. of Crown Stays

External Dish of Pinch at Top

No. of Water Tubes

Material of Water Tubes

No. of Screwed Stays in Pinch Sides

Are they fitted with Nuts inside?

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

Are they fitted with Spring Drums?

Date of Hydrostatic Test

Pressure on Valves



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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

Blakes Patent

Height of Boiler Crown above Fire Grate

abt 12'-8"

Are Boiler Crowns Flat or Dished?

Dished

Internal Radius of Dished Ends

3'-6"

Thickness of Plates

$\frac{1}{2}$ "

Description of Seams in Boiler Crowns

Long 2, Circ 1 R.

Diar. of Rivet Holes

$\frac{15}{16}$ "

Pitch

3' + 2 $\frac{1}{4}$ "

Width of Overlap

4 $\frac{5}{8}$ " + 2 $\frac{7}{8}$ "

Height of Firebox Crowns above Fire Grate

abt 7'-9"

Are Firebox Crowns Flat or Dished?

Dished

External Radius of Dished Crowns

3'-9 $\frac{1}{16}$ "

Thickness of Plates

$\frac{1}{16}$ "

No. of Crown Stays

none

Effective Diar.

Material

External Diar. of Firebox at Top

3'-6"

Bottom

3'-6"

Thickness of Plates

$\frac{19}{32}$ "

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.



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MAIN STEAM PIPES.

No. of Lengths

4

Material

Iron

Brazed, Welded, or Seamless

Welded

Internal Diam.

4½"

Thickness

1¼"

How are Flanges Secured?

Screwed

Date of Hydraulic Test

18/9/7

Test Pressure

540 lbs.

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, "

Diam. of Crank Shafts

No. of Cranks

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

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

No. and Description of Dynamos

Makers of Dynamos

| Capacity | Amperes, at | Volts, | Revol. per Min. |
|----------|-------------|--------|-----------------|
|----------|-------------|--------|-----------------|

Current Alternating or Continuous

Position of Dynamos

Main Switch Board

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

Particulars of these Circuits:—

[illegible]

Total No. of Lights

No. of Motors driving Fans, &c. No. of Heaters

Current required for Motors and Heaters

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 Driving Fans, &c. No. of Heaters

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

On Aux. " " each Auxiliary Circuit

Wherever a Cable is reduced in size

To each Lamp Circuit

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

Are the Fuses of Standard Sizes?

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

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

| | | | |
|--------------------------------|---------|--------------|--------|
| Smallest Single Wire used, No. | S.W.G., | Largest, No. | 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 Bulkhead

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?

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

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EVAPORATORS.

No. *one* Type *Monisons* Tons per Day *10*
 Makers *Richardsons, Westgarth & Co. Hartlepool.*
 Working Pressure *10lbs* Test Pressure *50lbs* Date of Test *20-9-07*
 Date of Test of Safety Valves under Steam ☒

FEED WATER HEATERS.

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

DONKEY

No. of Donkeys _____
 Type „ _____
 Makers „ _____
 Single or Duplex _____
 „ Double-Acting _____
 Diar. of Steam Cylinders _____
 „ Pumps _____
 Stroke of „ _____
 Where do they pump from? *Sea, Tanks*
Bilges (main + direct)
 Where do they discharge to? *Tanks, Overboard*
Condensers.

Capacity, Tons per Hour of Ballast Donkey

150

Diar. of Pipe required by Rule for

FEED WATER FILTERS.

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

FORCED DRAUGHT FANS.

No. of Fans _____ Diar. _____ Revols. per min. _____
 How are Fans driven? _____

PUMPS.

Feed *S.B. Feed.*
one *one*
Horizontal *Horizontal*
Cureka. *Tangye*
Duplex *Duplex*
Double *Double*
5 1/4" *4"*
3 1/2" *2 1/2"*
5" *4"*
Sea, Boilers. *Sea*
Hotwell, Tanks

Boilers, Deck,
Overboard.

largest Ballast Tank

4"

Velocity of Water in Pipe

1000 ft per min.

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SPARE GEAR.

| | | | |
|---------------------------|-------|---------------------------------|----------------|
| No. of Top End Bolts | 2 | No. of Bot. End Bolts | 2 |
| " Main Bearing Bolts | 2 | " Coupling Bolts | 6 |
| " Cylr. Cover Bolts Studs | 6 | " Valve Chest Cover Bolts Studs | 6 |
| " Feed Pump Valves | 1 set | " Bilge Pump Valves | 1 set. |
| " Safety Valve Springs | ✓ | " Fire Bars | for 1 furnace. |
| " Piston Rings | ✓ | " Junk Ring Bolts Studs | 6 |
| " Piston Rods | ✓ | " Connecting Rods | |
| " Valve Spindles | ✓ | " Air Pump " | one |
| " Air Pump Valves | ✓ | " " Buckets | ✓ |
| " Crank Pin Bushes | ✓ | " Crosshead Bushes | ✓ |
| " Crank Shafts | ✓ | " Propeller Shafts | one (Iron) |
| " Propellers | one | " " Blades | ✓ |
| " Boiler Tubes | ✓ | " Condenser Tubes | ✓ |

OTHER ARTICLES OF SPARE GEAR:-

6 condr. ferrules
 6 gauge glasses
 3 plates iron
 3 bags "
 50 bolts and nuts assorted.
 100 additional firebars
 1 main feed check valve
 1 donkey "
 1 set H.P. + L.P. piston springs
 1 eccentric strap.
 Valves for donkey pumps.

GENERAL CONSTRUCTION.

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

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? *Yes*

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? *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.

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

Fees—

MAIN BOILERS.

H.S. 3442 Sq. ft. 15 : 0 : 0

G.S. 76 " : :

DONKEY BOILERS.

H.S. 500 Sq. ft. : :

G.S. 25 " : :

£ 15 : 0 : 0

ENGINES.

L.P.C. 47.71 Cub. ft. 13 : 0 : 0

£ 28 : 0 : 0

Testing, &c. : :

£ : :

Expenses : :

Total ... £ 28 : 0 : 0

It is submitted that this Report be approved,

Alfred King
Chief Surveyor.

Approved by the Committee,

for the class of M B S*
on the 20th November 1907

Fees applied for

23. 10. 07

Fees paid

25. 10. 07

Alfred King
Secretary.



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Main Balance

3442 15 0 0

76

Direct Balance

500 15 0 0

25

15 0 0

Expenses

47 71 13 0 0

28 0 0

Total 15 0 0

Total 15 0 0

It is submitted that this Report be approved.

Thomas King
 Chief Manager

Approved by the Committee

*for the letter of M.B.S.K.
 on the 15th November 1907*

Date signed for

23. 10. 07

Date paid

20. 10. 07

Robert Manning
 Secretary



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