

No. 977

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

W. H. S.

Report No. *939* No. in Register Book *1498*

S.S. " *EASTON* "

Makers of Engines *North Eastern Marine Eng. Co.*

Works No. *2053*

Makers of Main Boilers *North Eastern Marine Eng. Co.*

Works No. *2053.*

Makers of Donkey Boiler *✓*

Works No. *✓*

MACHINERY.



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002583-002591-0134

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *939*. No. in Register Book *1498*

Received at Head Office

19 July 1912

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

"Gaston"

Port of Registry

Sunderland.

Registered Owners

Mathews Steam Shipping Co. Ltd.

Surveyor's District

Wear & Tees.

Date of Completion of Engines

19/6/12.

" "

" "

" Main Boilers

19/6/12

" "

" "

" Donkey "

✓

Trial Run

on North sea

Date

19/6/12

First Visit

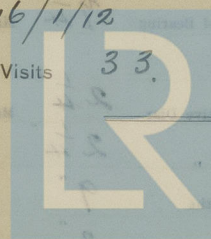
16/1/12

Last Visit

19/6/12.

Total Number of Visits

33.



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ENGINES.

Made by north eastern marine.

" at Sunderland Works No 2053

Description Triple Expansion

No. of Cylinders, each Engine 3 Diars. 14"-28"-46" Stroke 33"

Cub. feet in each L.P. Cylr. 31.73 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. 1 1/8" L.P. 1 1/8" "

" " " " Liner " " " "

" " " " Valve Chest 1" 7/8" " "

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

" " " each Receiver? I.P. L.P.

Number of Bolts in H.P. Cylr. Cover 14 L.P. 18 2nd I.P. ✓ L.P. 22

Eff. Diar. " " 1 1/8" 1 1/8" " ✓ " 1 1/8"

Pitch " " 4 1/2" 5 3/8" " ✓ " 7"

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

" Valve Gear Stephenson's link motion.

Diameter of Piston Rods (plain part) $4 \frac{1}{4}$ At Bottom of Thread 3.287

Makers " Northumberland Forge Material Iron

Diameter of Connecting Rods (smallest part) $4 \frac{3}{8}$ " Material Iron
Makers " " Northumberland & Co. York

Diam. of Crosshead Gudgeons	Length of Bearing	Material
5"	$7\frac{1}{4}$ "	Steel

No. of Top End Bolts (each Rod)	2	Effective Diam.	2 $\frac{1}{4}$ "	Material	Iron
" Bot. " "	2	"	2 $\frac{1}{4}$ "	"	Iron
" Main Bearings	6	Lengths	9"		
" Bolts in each	2	Effective Diam.	2"	Material	Iron

No. of Holding Down Bolts, each Engine *34* No. of Metal Checks
Eff. Diar. " " "*1 1/2* Average Pitch *21"*
Are the Engines bolted directly to the Tank Top? *Y.*
Are the Bolts tapped through the Tank Top and fitted with Nuts inside? *Fitted bolts.*
Date of Test of Tank by Water Pressure with Holding Down Bolts in place *19/6/12*

SKETCHES.

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SKETCHES.

SHAFTING.

Are Crank Shafts Built? *Yes* No. of Lengths in each *3* Angle of Cranks *120°*
 Diam. of Crank Shafts by Rule *8.99* Actual *9 1/2* Diam. in Way of Webs *10*
 Makers of " *John Rigelson & Son* Material *Steel*
 Diam. of Crank Pins *9 1/2* Diam. in Way of Web *9 1/2*
 Makers of " *John Rigelson & Son* Material *Steel*
 Width across Crank Webs at Centre of Shaft *19 1/2* Thickness
 " " " " Crank Pins *18*
 " " " " Narrowest part *12*
 Makers of Crank Webs *John Rigelson & Son* Material *Steel*
 Diam. or Breadth of Keys in Crank Webs *1 3/4* Length *5*
 " of Dowel Pins in Crank Pins *1* Length *3* Screwed or Plain *screwed*
 No. of Bolts in each Coupling *6* Diam. at Mid Length *2 1/4* Diam. of Pitch Circle *14*
 Material of Coupling Bolts *steel*
 Crank Shafts Finished by *John Rigelson & Son*
 Greatest Distance from edge of Main Bearing to Crank Web *clearance*
 Description of Thrust Blocks *Horsehoe type*
 Number " " Rings

Diam. of Thrust Shafts by Rule *8.99* Actual (at bot. of Collars) *9 1/2* Over Collars *15 7/8*
 " " at Forward Coupling *9 1/2* After Coupling *9*
 No. of Thrust Collars *5* Thickness *2 1/2* Distance apart *3*
 Thrust Shafts Forged by *Buzynski & Son* Material *Steel*
 " Finished by *H. Claine*

Diam. of Intermediate Shafting by Rule

No. of Lengths, each Engine

Diam. of Bearings

Length

No. of Tunnel Bearings

Distance apart

No. of Bolts, each Coupling *Shafting* Diar. at Mid Length Diar. of Pitch Circle *Actual*
 Intermediate Shafts Forged by *Burgin & Co. Ltd* Material *Steel*
 " " Finished by *H. Marine*
 Diar. of Propeller Shafts by Rule *10.14"* Actual *10.4"* At Couplings *9.2"*
 Are Propeller Shafts fitted with Continuous Brass Liners? *yes*
 Diar. over Liners *11 3/8"* Length of After Bearings *3'-6"*
 Of what Material are the After Bearings composed? *Brass & lignum vitae*
 Distance from After Bearing in Stern Tube to nearest Tunnel Bearing
 Are the After Bearings lubricated with Oil or Sea Water? *Sea water.*
 What means are adopted to prevent Sea Water entering the Stern Tubes? *none*
 Propeller Shafts Forged by *Burgin & Co. Ltd* Material *Steel*
 " " Finished by *H. Marine*
 No. of Propellers *1* Diar. *12'-0"* Pitch *12'-6"*
 " Blades, each Propeller *56 f 4* Fitted or Solid *Fitted*
 Material of Blades *Cast iron* Boss *Cast steel*
 Surface, each Propeller *56 f* Diar. of Propeller Rule Diar. of Crank Shaft = *16.07*
 Coefficient of Displacement of Vessel at $\frac{4}{5}$ Moulded Depth *.795*

SKETCHES, UT



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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

SKETCHES.



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SKETCHES.

SKETCHES.

How are the pumps worked? *By hand off main engine*
 Dist. of Air Pump Rod *12"*
 Type of *over*
 No. of Air Pumps *one*

How are the pumps worked? *By hand*
 Dist. of Air Pump Rod *12"*
 Type of *over*
 No. of Air Pumps *one*

How are the pumps worked? *By hand*
 Dist. of Air Pump Rod *12"*
 Type of *over*
 No. of Air Pumps *one*

How are the pumps worked? *By hand*
 Dist. of Air Pump Rod *12"*
 Type of *over*
 No. of Air Pumps *one*

How are the pumps worked? *By hand*
 Dist. of Air Pump Rod *12"*
 Type of *over*
 No. of Air Pumps *one*



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PUMPS. ETC

No. of Air Pumps *one* Diar. *15"* Stroke *16 1/2"*
 Type of " *Edwards*
 Diar. of Air Pump Rod *2 1/4"* Material *Inmbr metal*
 How are Air Pumps Worked? *By lever off main engine*

No. of Centrifugal Circulating Pumps *one* Maker
 " Reciprocating " " ✓ Diar. ✓ Stroke ✓
 Diar. of Circulating Pump Rods " Material
 How are Circulating Pumps Worked? *Engine direct*

Diar. of Circulating Pump Suction from Sea *7"*
 Has each Circulating Pump a Bilge Suction with Non-return Valve? *yes* Diar. *5"*

No. of Feed Pumps on each Engine *2* Diar. *2 3/4"* Stroke *16 1/2"*
 Where do they pump from? *Naturel*
 " " discharge to? *Boilers, thro' heaters.*
 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. *3"* Stroke *16 1/2"*
 Where do they pump from? *Tanks + bilges*
 " " discharge to? *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

North Eastern Marine.

" at

Pun derland.

Works No.

2053

Date when Plan approved

18/11/11

Boiler Plates, Iron or Steel

Steel

Makers of Shell Plates

J. Shence.

" Internal Plates

do

" Furnaces

Deighton & Co.

" Stay Bars

J. Shence.

" Rivets

J. Miller Co.

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

2

Type of Furnaces

Deighton

Approved Working Pressure

185 lbs.

Hydraulic Test Pressure

370 lbs.

Date of Hydraulic Test

1/6/12

" when Safety Valves set

14-6-12.

Pressure on Valves

190 lbs / 10"

Date of Steam Accumulation Test

14-6-12.

Max. Pressure under Accumulation Test

200 lbs / 10"

System of Draught

Natural. Howden's forced.

Can Boilers be worked separately?

Yes.

Greatest Inside Diam. of Boilers

11'-9 1/16"

" " Length "

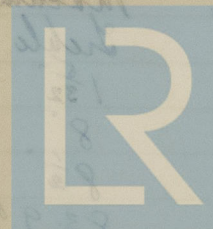
10'-9 1/16"

Square Feet of Heating Surface, each Boiler

1375 sq

" Grate "

33.4 sq



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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, " "

" Sallinometer 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

2

2 1/4"

7.95"

ylo

one

one

2

one

no

✓

cocks

one

2

1 3/32"

1 3/32"

Drilled

steel

Butt.

ylo.

1"

1"

Machine

Treble

1 5/32"

8"

8 1/2"

83.9%



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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 2

Are these Seams Hand or Machine Riveted? *Back machine, front hand rivetted*Diar. of Rivet Holes $1\frac{5}{32}$ "Pitch " $3\frac{1}{2}$ "Width of Overlap $5\frac{3}{8}$ "Size of Manholes in Shell $16" \times 12"$ Dimensions of Compensating Rings *Plate flanges.*

Thickness of End Plates in Steam Space by Rule

" " " " " Approved $1\frac{1}{32}$ "" " " " " in Boilers $1\frac{1}{32}$ "Pitch of Steam Space Stays $1-5\frac{1}{8}" \times 1-3\frac{5}{8}"$

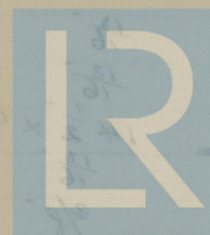
Eff. Diar. " " " by Rule

" " " " " Approved $2.783"$ " " " " " in Boilers $2.783"$ Material of " " " *Steel*How are Stays Secured? *Double nuts washers.*Diar. and Thickness of Loose Washers on End Plates $9" \times \frac{11}{16}"$

" " Riveted " " " ✓

Width " " Doubling Strips " " " ✓

Thickness of Middle Back End Plate by Rule

" " " " " Approved $\frac{7}{8}"$ " " " " " in Boilers $\frac{7}{8}"$ 

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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 " " "

$$14\frac{1}{8} \times 9\frac{3}{8}$$

$$1.88$$

$$1.88$$

steel

$$\frac{7}{8}$$

$$\frac{7}{8}$$

$$\frac{7}{8}$$

$$\frac{7}{8}$$

$$\frac{7}{8}$$

$$\frac{7}{8}$$

$$\frac{7}{8}$$

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$$\frac{7}{8}$$

$$\frac{7}{8}$$

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



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Are Stay Tubes fitted with Nuts at Front End?

where necessary.

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 Diar. of Tubes

Material " "

Thickness of Furnace Plates by Rule

" " " Approved

" " " in Boilers

Smallest outside Diar. 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. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides by Rule

$$\begin{array}{r} \frac{8}{4} \\ \frac{3}{4} \\ 13\frac{1}{2} \times 9 \\ 4\frac{1}{2} \times 4\frac{1}{2} \\ \frac{5}{16} \\ 8 \text{ by.} \\ 3\frac{1}{4} \\ \text{Iron.} \end{array}$$

$$\begin{array}{r} \frac{1\frac{1}{2}}{32} \\ \frac{1\frac{1}{2}}{32} \\ 3' - 4\frac{3}{16} \\ 7' - 6 \text{ over} \end{array}$$

$$2' - 7\frac{1}{2} \text{ over.}$$

$$\begin{array}{r} \frac{3}{4} \\ \frac{3}{4} \\ 9\frac{1}{2} \times 8\frac{3}{4} \end{array}$$

$$\begin{array}{r} 1.5085 \\ 1.5085 \\ \text{steel} \end{array}$$

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 Sides by Rule

" " " Approved

" " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

For all screw stays used with nuts made in C.C.

Thickness of Combustion Chamber Bottoms

No. of Rivets over each Wing Chamber

" " " " " "

Depth and Thickness of Rivets

Material of Rivets

No. of Rivets in each



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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

$$\frac{9}{4}''$$

$$\frac{3}{4}''$$

$$10\frac{1}{4}'' \times 9\frac{1}{2}''$$

$$1.6335''$$

$$1.6335''$$

$$\text{Steel}$$

$$\frac{13}{16}''$$

$$\frac{13}{16}''$$

$$11\frac{7}{8}'' \times 9\frac{3}{8}''$$

$$1.7585''$$

$$1.7585''$$

$$\text{Steel}$$

$$\frac{13}{16}''$$

$$5$$

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

$$\text{Steel}$$

$$2$$

$$50$$

$$120$$

$$16 \times 12''$$

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 Fire Grate

Are Boiler Crown Flat or Dished

Internal Radius of Dished Ends

Description of Stays in Boiler Crown

Pitch of Stay Bolts

Height of Staybolts Crown above Fire Grate

Are Staybolts Crown Flat or Dished

Internal Radius of Dished Crown

No. of Crown Stays

Internal Pitch of Staybolts at Top

No. of Stay Bolts

Material of Stay Bolts

No. of Screwed Stays in Pressure Shell

Are they fitted with Nuts inside?

SUPERHEATERS

Description of Superheater

Where situated

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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

Description of Seams in Boiler Crowns

Diar. of Rivet Holes

Pitch

Thickness of Plates

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.



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MAIN STEAM PIPES.

No. of Lengths	1	2
Material	Copper	
Brazed, Welded, or Seamless	Seamless	
Internal Diam.	4 $\frac{3}{4}$ "	3 $\frac{1}{2}$ "
Thickness	5-wg.	8-wg.
How are Flanges Secured?	Braced.	
Date of Hydraulic Test	11/6/12.	
Test Pressure	400 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.

Is the Machine Room electrically separated from the main power house?

properly contained and drained?

No. of Steam Cylinders and Machines

Compensators

No. of Crank Shafts

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

Refrigerating Machines or Indirectly

REFRIGERATORS.

No. of Machines

Make

Description

Are there any other Refrigerating Plants used in the Machine Room?

State of Test under Working Conditions

Rate of Temperature in Machine Room

Time required to obtain this result

Location of Space down for Refrigerating Plant carried on board

ELECTRIC LIGHTING.

Installation Fitted by

The Sunderland Forge & Eng. Co. Ltd.

No. and Description of Dynamos

One Compound wound.

Makers of Dynamos

The Sunderland Forge & Eng. Co. Ltd.

Capacity

73

Amperes, at

40

Volts,

575

Revs. per Min.

Current Alternating or Continuous

Continuous

Position of Dynamos

Double wire system

Main Switch Board

Top of engine room, Port side
Close to dynamo.

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

9

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	Forward Quarter	12	16	6.72	7/21 1/2	1300	99%	600 meg.
2	Aft Quarter	14	16	7.84	"	1500	"	"
3	Forward	16	"	8.96	"	1600	"	"
4	Hold light	12	"	6.72	"	1300	"	"
5	Deck light	14	"	7.84	"	1500	"	"
6	Aft. Acc. P.	12	"	6.72	"	1300	"	"
7	" S.	14	"	7.84	"	1500	"	"
8	Upper Eng. R.	14	"	7.84	"	1500	"	"
9	Lower	14	"	7.84	"	1500	"	"

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

One in wheel house with switch + fuses for lights, mainheads, Binnacle & Telegraph

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. 18 S.W.G., Largest, No. 16 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

Iron pipes.

- do -

- do -

*by iron pipes
Lead covered wires*

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? *There are no joints*

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

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

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

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

Has the Insulation Resistance over the whole system been tested? *Ylo.*

What does the Resistance amount to?

85000 Ohms.

Is the Installation supplied with a Voltmeter?

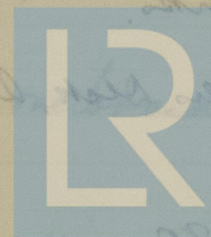
" " " an Ampere Meter?

Date of Trial of complete Installation

20/6/12

Duration of Trial

6 hrs.



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EVAPORATORS.

No. ~~1~~ Type ~~H. J. Wein~~ Tons per Da ~~25~~
 Makers ~~H. J. Wein~~
 Working Pressure _____ Test Pressure _____ Date of Test _____
 Date of Test of Safety Valves under Steam _____

FEED WATER HEATERS.

No. ~~1~~ Type ~~Horizontal~~ Makers ~~North Eastern Marine, H. J. Wein~~
 Working Pressure ☒ Test Pressure ☒ Date of Test ☒

DONKEY

No. of Donkeys One Feed.
 Type " Horizontal
 Makers " Worthington
 Single or Duplex Duplex.
 " Double-Acting Double
 " 9"
 Diar. of Steam Cylinders 5 1/4"
 " Pumps 10"
 Stroke of " 10"
 Where do they pump from? sea, hotwell, boilers
 , tanks.
 Where do they discharge to? Boilers, Deck, Ash Ejector

Capacity, Tons per Hour of Ballast Donkey

80

Diar. of Pipe required by Rule for

FEED WATER FILTERS.

No. ~~1~~ Type ~~Horizontal~~ Size ~~_____~~
 Makers ~~North Eastern Marine~~
 Working Pressure ☒ Test Pressure ☒ Date of Test ☒

FORCED DRAUGHT FANS.

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

PUMPS.

One ballast
 Horizontal
 H. C. Marine
 Duplex
 Double
 6"
 7"
 9"
 Tanks, Bilges
 Sea

One sanitary
 Horizontal
 Worthington
 Duplex
 Double
 4 1/2"
 2 3/4"
 4"
 Sea & Tanks.

Condenser, overboard

largest Ballast Tank

4"

Velocity of Water in Pipe

535 ft per min.

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Sanitary &
 Fresh Water Tanks
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SPARE GEAR.

No. of Top End Bolts	2	No. of Bot. End Bolts	2
" Main Bearing Bolts	2	" Coupling Bolts	1 set
" Cylr. Cover Bolts Studs	12	" Valve Chest Cover Bolts Studs	
" Feed Pump Valves	2	" Bilge Pump Valves	2
" Safety Valve Springs	2	" Fire Bars	1/4 set
" 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	2	" " Blades	✓
" Boiler Tubes	✓	" Condenser Tubes	6

OTHER ARTICLES OF SPARE GEAR:-

20 assorted bolts & nuts
 50 Condenser ferrules
 2 cast iron plate
 2 cast iron bars.

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

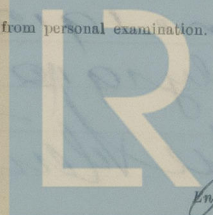
Surveyor

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.



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

Fees—

MAIN BOILERS.

H.S.

Sq. ft.

G.S.

"

DONKEY BOILERS.

H.S.

Sq. ft.

G.S.

"

£

s.

d.

ENGINES.

L.P.C.

Cub. ft.

£

s.

d.

Testing, &c. ...

£

s.

d.

Expenses ...

Total ... £ 23 : 0 : 0

It is submitted that this Report be approved,

Walter Knig
Chief Surveyor.

Approved by the Committee, for the Class of M.B.S.
on the 24th July, 1912.

Fees applied for

18th June 1912.

Fees paid

4th July 1912.

Walter Knig
Secretary.



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Marie King

was named for the Class of M.B.S.
on the 10th July 1912.

1st June 1912
10th July 1912

Marie King



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