

No. 2201

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 2184 No. in Register Book 3548

" "   
S.S. STINA

Makers of Engines *Cunthor Dock Co. Ltd.*

Works No. 316.

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

Works No. D179.

Makers of Donkey Boiler

Works No.

MACHINERY.

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003884-003894-0002



No.

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. .... No. in Register Book .....

Received at Head Office *14th December 1928*

Surveyor's Report on the New Engines, Boilers, and Auxiliary  
Machinery of the ~~Single Triple~~ *Whale*  
~~Twin Quadruple~~ Screw "*China*"

Official No. *160649* Port of Registry *Leith*

Registered Owners

*The South Georgia Co. Ltd.*

Engines Built by

*Clyde Dock Co. Ltd.*

at

*South Bank-on Leas*

Main Boilers Built by

*Richardson, Westgarth & Co. Ltd.*

at

*Hartlepool*

Donkey " " "

at

Date of Completion

*8-28*

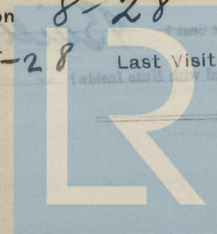
First Visit *15-5-28*

Last Visit

*1-8-28*

Total Visits

*30*



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## RECIPROCATING ENGINES.

Works No. *316* No. of Sets *1* Description *Triple expansion  
300 Berks.*

No. of Cylinders each Engine *3* No. of Cranks *3*  
Diams of Cylinders *14" - 23" - 39"* Stroke *24"*  
Cubic feet in each L.P. Cylinder *16.6*

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

" " " each Receiver? *yes.*

Type of H.P. Valves, *high  
slide.*

1st I.P. "

2nd I.P.,

L.P. "

" Valve Gear *Slide  
Stephenson Link.*

" Condenser *Surface.*

Cooling Surface *925* sq. ft.

Diameter of Piston Rods (plain part) *4"*

Screw part (bottom of thread) *2.84"*

Material " *Stat.*

Diam. of Connecting Rods (smallest part) *3 5/8"*

Material *W.G.*

" Crosshead Gudgeons *4"*

Length of Bearing *4 1/2"*

Material *Stat.*

No. of Crosshead Bolts (each) *4*

Diam. over Thrd. *1 3/4"*

Thrds. per inch *7*

Material *W.G.*

" Crank Pin " *2*

" *2 1/4"*

" *6*

" *"*

" Main Bearings *6*

Lengths *9"*

" Bolts in each *2*

Diam. over Thread *2"*

Threads per inch *7*

Material *W.G.*

" Holding Down Bolts, each Engine *5 1/4"*

Diam. *1 1/4"*

No. of Metal Chocks *5 1/4"*

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

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

If not, how are they fitted? *-*

Connecting Rods, Forged by *Brown Bros.*

Piston " "

Crossheads, " "

Connecting Rods, Finished by *Smiths Bros.*

Piston " "

Crossheads, " "

Date of Harbour Trial *25-7-28*

" Trial Trip *1-8-28.*

Trials run at *On measured mile.*

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

If so, what was the I.H.P.? *780*

Revol. per min. *150*

Pressure in 1st I.P. Receiver, *62* lbs., 2nd I.P.,

lbs., L.P., *11* lbs., Vacuum, *25* ins.

Speed on Trial *12.45 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.

Revol. per min.

Estimated Speed



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## TURBINE ENGINES.

Works No. \_\_\_\_\_ Type of Turbines \_\_\_\_\_  
 No. of H.P. Turbines \_\_\_\_\_ No. of I.P. \_\_\_\_\_ No. of L.P. \_\_\_\_\_ No. of Stern \_\_\_\_\_

Are the Propeller Shafts driven direct by the Turbines or through Gearing? \_\_\_\_\_

Is Single or Double Reduction Gear employed? \_\_\_\_\_

Diam. of 1st Reduction Pinion \_\_\_\_\_  
 " 1st " Wheel \_\_\_\_\_ } Width \_\_\_\_\_ Pitch of Teeth \_\_\_\_\_

Estimated Pressure per lineal inch \_\_\_\_\_

Diam. of 2nd Reduction Pinion \_\_\_\_\_  
 " 2nd " Wheel \_\_\_\_\_ } Width \_\_\_\_\_ Pitch of Teeth \_\_\_\_\_

Estimated Pressure per lineal inch \_\_\_\_\_

Revs. per min. of H.P. Turbines at Full Power \_\_\_\_\_ S.H.P. \_\_\_\_\_

" " I.P. " " \_\_\_\_\_

" " L.P. " " \_\_\_\_\_

" " 1st Reduction Shaft \_\_\_\_\_

" " 2nd " \_\_\_\_\_

" " Propeller Shaft \_\_\_\_\_

Total Shaft Horse Power \_\_\_\_\_

Date of Harbour Trial \_\_\_\_\_

" Trial Trip \_\_\_\_\_

Trials run at \_\_\_\_\_

Speed on Trial \_\_\_\_\_ Knots. Propeller Revs. per min. \_\_\_\_\_ S.H.P. \_\_\_\_\_

Turbine Spindles forged by \_\_\_\_\_

" Wheels forged or cast by \_\_\_\_\_

Reduction Gear Shafts forged by \_\_\_\_\_

" Wheels forged or cast by \_\_\_\_\_

## TURBO-ELECTRIC INSTALLATION.

No. of Turbine Generators \_\_\_\_\_ Capacity of each \_\_\_\_\_  
 Type of Turbine employed \_\_\_\_\_  
 Description of Generators \_\_\_\_\_

No. of Motors driving Propeller Shafts \_\_\_\_\_  
 Are the Propeller Shafts driven direct by the Motors or through Gearing? \_\_\_\_\_  
 Is Single or Double Reduction Gear employed? \_\_\_\_\_  
 Description of Motors \_\_\_\_\_

## DESCRIPTION OF INSTALLATION.

Diam. of 1st Reduction Pinion \_\_\_\_\_  
 " 1st " Wheel \_\_\_\_\_ } Width \_\_\_\_\_ Pitch of Teeth \_\_\_\_\_

Diam. of 2nd Reduction Pinion \_\_\_\_\_  
 " 2nd " Wheel \_\_\_\_\_ } Width \_\_\_\_\_ Pitch of Teeth \_\_\_\_\_

Estimated Pressure per lineal inch \_\_\_\_\_  
 Revs. per min. of Generators at Full Power \_\_\_\_\_  
 " " Motors \_\_\_\_\_

1st Reduction Shaft \_\_\_\_\_  
 2nd " \_\_\_\_\_  
 Propeller Shaft \_\_\_\_\_

Total Shaft Horse Power \_\_\_\_\_  
 Date of Harbour Trial \_\_\_\_\_

" Trial Trip \_\_\_\_\_  
 Trials run at \_\_\_\_\_

Speed on Trial \_\_\_\_\_ Knots. Propeller Revs. per min. \_\_\_\_\_ S.H.P. \_\_\_\_\_



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## TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

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

Diam. of 1st Reduction Pinion } Width Pitch of Teeth  
 " 1st " Wheel

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion } Width Pitch of Teeth  
 " 2nd " Wheel

Estimated Pressure per lineal inch

Revs. per min. of Generators at Full Power

" " Motors "

" " 1st Reduction Shaft

" " 2nd "

" " Propellers at Full Power

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

Speed on Trial Knots. Propeller Revs. per min. S.H.P.

## Makers of Turbines

" Generators

" Motors

" Reduction Gear

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

## DESCRIPTION OF INSTALLATION.

Type of Thrust Blocks

No. of Rings

Diam. of Thrust Shafts at bottom of collar

Forward Coupling

Diam. of Intermediate Shafts by Pinion

No. of Bolts, each Coupling

Diam. at Mid Length

Diam. of Pinion Circle

At All Couplings

No. of Collars

At All Couplings

No. of Lengths

At All Couplings

Diam. of Propeller Shafts by Pinion

Are Propeller Shafts fitted with Continuous Loose Thrusters?

Diam. over liners

Of what Material are the After Bearings composed?

Are the Bearings provided for adjusting the After Bearings with Oil?

Do the Bearings rest on the Stern Tubes?



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## SHAFTING.

### Are the Crank Shafts Built or Solid?

No. of Lengths in each

Diar. by Rule

" of Crank Pins

### Greatest Width of Crank Webs

Least                    "                    "

### Diag. of Keys in Crank Webs

„ Dowels in Crank Pins

No. of Bolts each Coupling

Greatest Distance from Edge of Main Bearing to Crank Web

### Type of Thrust Blocks

No.	"	Rings
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
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97		
98		
99		
100		

Diar. of Thrust Shafts at bottom of Collars

"	"	Forward Coupling
---	---	------------------

### Diar. of Intermediate Shafting by Rule

No. of Bolts, each Coupling

### Diar. of Propeller Shafts by Rule

### Are Propeller Shafts fitted with Continuous Brass Liners?

Diar. over Liners

Of what Material are the After Bearings composed ?

Are Means provided for lubricating the After Bearings with Oil ?

„ „ to prevent Sea Water entering the Stern Tubes?

If so, what Type is adopted ?

### SKETCH OF CRANK SHAFT

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*new propeller C.S. 9/29*

No. of Blades each Propeller *4* Fitted or Solid? *solid.*  
 Material of Blades *Cast steel* Boss *C.S.*  
 Diam. of Propellers *9'-0"* Pitch *10'-2"* Surface (each) *32* S. ft.)  
 Coefficient of Displacement of Vessel at  $\frac{1}{2}$  Moulded Depth

Crank Shafts Forged by	<i>Yip Long Co.</i>	Material	<i>L.S.</i>
" Pins "	"	"	"
" Webs "	"	"	"
Thrust Shafts "	"	"	"
Intermed. " "	"	"	"
Propeller " "	"	"	"
Crank " Finished by	"		
Thrust " "	"		
Intermed. " "	"		
Propeller " "	"		

## STAMP MARKS ON SHAFTS.

Crank Shaft:-

*B.C.*  
*N°10941*  
*20-4-28*  
*R.S.*

Thrust Shaft:-  
Tail Shaft:-

*B.C.*  
*N°10941*  
*23-5-28*  
*R.S.*

Tail Shaft (Chase):-

*B.C.*  
*N°10941*  
*30-5-28*  
*R.S.*

## SKETCH OF PROPELLER SHAFT.

*Sketch of Propeller Shaft*

No. of Air Pumps

Worked by Main or Independent Engines?

No. of Circulating Pumps

Type of

Diam. of

Each pump a high suction with Non-return Valve?

What other pumps can operate through Condenser?

No. of Feed Pumps on Main Engines

Are Spring-loaded Relief Valves fitted to each pump?

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

No. of Independent Feed Pumps

What other pumps can feed the boilers?

No. of High Pumps on Main Engines

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

No. of Independent High Pumps

What other pumps can draw from the bilges?

Are all Bilge Suctions fitted with Ropes?

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

Are all sea Connections made with Valves or Clamps next the ship's side?

Are they placed so as to be easily accessible?

Are the Discharge Chests placed above or below the Dead Weight?

Are the Discharge Pipes to the bilges easily accessible?

Are all live-off cocks or valves fitted with 3/4 inch and Covering Plates or Flanges on the pipes?



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## BOILERS.

Works No.

No. of Boilers

1

Type

D 179.  
Cylindrical multitubular  
single.

Single or Double-ended

No. of Furnaces in each

3

Type of Furnaces

Sligh-ton.

Date when Plan approved

26-4-28.

Approved Working Pressure

200 lbs.

Hydraulic Test Pressure

350 "

Date of Hydraulic Test

8-6-28

" when Safety Valves set

25-7-28

Pressure at which Valves were set

206 lbs.

Date of Accumulation Test

25-7-28

Maximum Pressure under Accumulation Test

206 lbs.

System of Draught

C.A.

Can Boilers be worked separately?

Makers of Plates

O. Calville & Sons Ltd. &  
R. B. & Co. Ltd.  
Leeds Forge Co. @

" Stay Bars

" Rivets

" Furnaces

Greatest Internal Diam. of Boilers

14'0"

" " Length "

11'6"

Square Feet of Heating Surface each Boiler

2292 sq

" " Grate " "

60 sq.

No. of Safety Valves each Boiler

2

Rule Diam.

Actual

2 1/2"

Are the Safety Valves fitted with Easing Gear?

yes.

No. of Pressure Gauges, each Boiler

2

No. of Water Gauges

1

" Test Cocks

"

3

" Salinometer Cocks

1

Are the Water Gauges fitted direct to the Boiler Shell or mounted on Pillars?

Are the Water Gauge Pillars fitted direct to the Boiler Shell or connected by Pipes?

Are the Pipes connected to Boilers by Joints 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 Approved

in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

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 Triple Riveted?

No. of Rivets in a Pitch

Pitch

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Pitch

No. of Rows of Rivets in Front and Circumferential Seams

Are these Seams Hand or Machine Riveted?

Pitch

Diam. of Rivet Holes

No. of Rows of Rivets in Back and Circumferential Seams

Are these Seams Hand or Machine Riveted?

Pitch

Diam. of Rivet Holes

Diam. of Rivet Holes in Shell

Dimensions of Connecting Pipes



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

*direct.*

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?

*valves.*

No. of Strakes of Shell Plating in each Boiler

Plates in each Strake

Thickness of Shell Plates Approved

in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

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?

No. of Rivets in a Pitch

Diam. of Rivet Holes

Pitch

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

Are these Seams Hand or Machine riveted?

Diam. of Rivet Holes

Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings

*1*

*2*

*1 1/4"*

*1 1/4"*

*steel.*

*butt*

*double*

*yes.*

*3/32"*

*1 3/32"*

*machine.*

*treble.*

*5*

*8 1/2"*

*1 1/4"*

*✓*

*✓*

*✓*

*2*

*hand*

*3 1/4"*

*2*

*machine.*

*3 1/4"*

*16 1/2" x 13"*

*2'-6 1/2" x 2'-5"*



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Thickness of End Plates in Steam Space Approved

" " " " in Boilers

Pitch of Steam Space Stays

Diar. " " " 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 Plates Approved

" " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at

Diar. of Stays Approved

" " in Boilers

Material "

Are Stays fitted with Nuts outside?

Thickness of Back End Plates at Bottom Approved

" " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom Approved

" " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

1 1/8"

1 1/8"

18 1/4" x 16"

278 1/2 Threads per Inch 6

278 1/2 3/4" 6

steel.

double-nuts.

✓

✓

✓

✓

✓

13 1/2" x 8 1/4"

17/8" Threads per Inch 9

17/8" 9

steel.

yes.

7/8"

7/8"

13 1/2" x 8 1/4"

3/4"

27/32"

27/32"

1



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Diar. of Stays Approved  $2\frac{1}{2}"$  Threads per Inch 6  
 " " in Boilers  $2\frac{1}{2}"$  6  
 Material " *steel.*  
 Thickness of Front Tube Plates Approved  $27/32"$   
 " " " " in Boilers  $27/32"$   
 Pitch of Stay Tubes at Spaces between Stacks of Tubes  $13\frac{1}{2}" \times 3\frac{5}{8}"$   
 Thickness of Doublings in " " "  
 " Stay Tubes at " " "  $5/16" \times 3/8" \times 7/16"$   
 Are Stay Tubes fitted with Nuts at Front End? *marginal only.*  
 Thickness of Back Tube Plates Approved  $3/4"$   
 " " " in Boilers  $3/4"$   
 Pitch of Stay Tubes in Back Tube Plates  $11\frac{5}{8}" \times 2\frac{1}{4}"$   
 " Plain "  $3\frac{5}{8}" \times 3\frac{3}{8}"$   
 Thickness of Stay Tubes  $5/16" \times 3/8" \times 7/16"$   
 " Plain " *steel.*  
 External Diar. of Tubes  $2\frac{1}{2}"$   
 Material " *Iron.*  
 Thickness of Furnace Plates Approved  $19/32"$   
 " " " in Boilers  $19/32"$   
 Smallest outside Diar. of Furnaces  $3'-5\frac{3}{16}"$   
 Length between Tube Plates  $8'-0"$   
 Width of Combustion Chambers (Front to Back)  $2'-9"$   
 Thickness of " " Tops Approved  $1/16"$   
 " " " " in Boilers  $1/16"$   
 Pitch of Screwed Stays in C.C. Tops  $9" \times 2\frac{1}{2}"$

Diar. of Screwed Stays Approved  $1\frac{1}{8}"$  Threads per Inch  $1\frac{1}{8}"$   
 " " in Boilers  $1\frac{1}{8}"$   
 Material " *steel.*  
 Thickness of Combustion Chamber Walls Approved  $1/16"$   
 " " " in Boilers  $1/16"$   
 Pitch of Screwed Stays in C.C. Stays  $1\frac{1}{8}" \times 1\frac{1}{8}"$   
 Diar. " Approved " Threads per Inch  $1\frac{1}{8}"$   
 " " in Boilers  $1\frac{1}{8}"$   
 Material " *steel.*  
 Thickness of Combustion Chamber Walls Approved  $1/16"$   
 " " " in Boilers  $1/16"$   
 Pitch of Screwed Stays in C.C. Stays  $1\frac{1}{8}" \times 1\frac{1}{8}"$   
 Diar. " Approved " Threads per Inch  $1\frac{1}{8}"$   
 " " in Boilers  $1\frac{1}{8}"$   
 Material " *steel.*  
 Are all Screwed Stays fitted with Nuts inside C.C.?  $1\frac{1}{8}"$   
 Thickness of Combustion Chamber Bottoms  $1/16"$



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Diar. of Screwed Stays Approved

Threads per Inch

9

" " " in Boilers

Material " "

15/8"   
 15/8"   
 steel.

Thickness of Combustion Chamber Sides Approved

1/16"   
 1/16"

" " " " in Boilers

Pitch of Screwed Stays in C.O. Sides

2 1/2" x 9 1/2"

Diar. " " Approved

Threads per Inch

9

" " " in Boilers

Material " "

15/8"   
 15/8"   
 steel.

Thickness of Combustion Chamber Backs Approved

1/16"   
 1/16"

" " " " in Boilers

Pitch of Screwed Stays in C.O. Backs

8 1/2" x 8 1/4"

Diar. " " Approved

Threads per Inch

9

" " " in Boilers

Material " "

1 7/8" x 1 7/8"   
 1 7/8" x 1 7/8"   
 steel.

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

y/ks.   
 1/8"

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

4

" " " Centre "

2

Depth and Thickness of Girders

9 1/4" x 1 5/8"   
 steel.

Material of Girders

No. of Stays in each

3

No. of Tubes, each Boiler

352

Size of Lower Manholes

16" x 12"

## VERTICAL DONKEY BOILERS

No. of Boilers

Height of Boiler Crown above Fire Grate

Are Boiler Crown Flat or Dished?

Internal Radius of Dished Ends

Description of Beams in Boiler Crown

Diam. of River Hoies

Height of Pinbox Crown above Fire Grate

Are Pinbox Crown Flat or Dished?

External Radius of Dished Crown

No. of Crown Stays

External Diam. of Pinbox at Top

No. of Water Tubes

Material of Water Tubes

Size of Manhole in Shell

Dimensions of Compensating Ring

Heating Surface, each Boiler

Gross Surface

## SUPERHEATERS

Description of Superheater

Where situated?

Which Boilers are connected to Superheater?

Can superheater be shut off while Boilers are working?

No. of Safety Valves on each Superheater

Date of Examination

Pressure on Valves



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## VERTICAL DONKEY BOILERS.

No. of Boilers                      Type

Greatest Int. Diar.                      Height

Height of Boiler Crown above Fire Grate

Are Boiler Crowns Flat or Dished ?

Internal Radius of Dished Ends                      Thickness of Plates

Description of Seams in Boiler Crowns

Diarr. 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                      Diarr.                      Material

External Diarr. of Firebox at Top                      Bottom                      Thickness of Plates

No. of Water Tubes                      Ext. Diarr.                      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                      Diarr.

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 Seamless

Internal Diarr.

Thickness

How are Flanges secured ?

Date of Hydraulic Test

Test Pressure

No. of Pipes

Material

Radius, Welded or Seamless

Internal Diarr.

Thickness

How are Flanges secured ?

Date of Hydraulic Test

Test Pressure



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MAIN STEAM PIPES.

No. of Lengths

### Material

Brazed, Welded or Seamless

Internal Diar.

### Thickness

### How are Flanges secured ?

Date of Hydraulic Test \_\_\_\_\_

### Test Pressure

No. of Lengths

### Material

Brazed, Welded or Seamless

Internal Diar.

### Thickness

How are Flanges secured?

Date of Hydraulic Test

### Test Pressure

No. of Lengths

### Material

Brazed, Welded or Seamless

Internal Diar.

### Thickness

How are Flanges secured ?

Date of Hydraulic Test

### Test Pressure

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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.	1	Type	cascade.	Size
Makers	Curtis Bros.			
Working Pressure		Test Pressure		Date of Test

LIST OF DONKEY PUMPS.

Edwards, 6" x 4 1/4" x 6" General Service.  
H. Watsons 7" Centrifugal pump.

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OTHER ARTICLES OF SPARE GEAR:—

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## ELECTRIC LIGHTING.

Installation Fitted by

*R. Pickersail & Sons Ltd.*

No. and Description of Dynamos

*One compound wound  
Sunderland Forge Eng Co*

Makers of Dynamos

Capacity " *40* Amperes, at *110* Volts, *350* Revols. 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>Navigation</i>	<i>11</i>	<i>330 watts</i>	<i>3.3</i>	<i>7/029</i>	<i>166</i>	<i>166</i>	<i>600000</i>
<i>Engine Room &amp; app.</i>	<i>23</i>	<i>690 watts</i>	<i>6.9</i>	<i>7/036</i>			
<i>Hydship &amp; Toward.</i>	<i>18</i>	<i>240 watts</i>	<i>5.4</i>	<i>7/029</i>			
<i>Wireless</i>	<i>1/4</i>	<i>1/4 kw.</i>	<i>10</i>	<i>7/036</i>			

Total No. of Lights

*52*

No. of Motors driving Fans, &amp;c.

No. of Heaters

Current required for Motors and 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. 11.044 S.W.G., Largest, No. 19.044 S.W.G.

**How are Conductors in Engine and Boiler Spaces protected?**

"	"	Saloons, State Rooms, &c.,	"	2
---	---	----------------------------	---	---

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
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Have the Machinery and Hobbies been constructed in accordance with the requirements of the Bureau? ☒ Is unimpaired?

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

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

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

A 173 © 0000



## GENERAL CONSTRUCTION

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

Approved Plans? *yes.*

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

Surveyor. *yes.*

## Fees—

## MAIN BOILERS.

		£	s.	d.
H.S.	<i>2292</i> Sq. ft.	:	:	:
G.S.	<i>60</i> "	:	:	:

## DONKEY BOILERS.

H.S.	Sq. ft.	:	:	:
G.S.	"	:	:	:
	£	:	:	:

## ENGINES.

L.P.O.	<i>16.6</i> Cub. ft.	:	:	:
	£	:	:	:

Testing, &c. ...	:	:	:	:
	£	:	:	:

Expenses ...	:	:	:	:
Total ...	£	:	:	:

It is submitted that this Report be approved,

*Joe Barr*  
for Chief Surveyor.

Approved by the Committee for the Class of M.B.S.\* on the 9<sup>th</sup> January 1929

Fees advised

Fees paid



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Secretary.

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

" *STINA* "

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



22. *Salmon*

Министерство

Total

Approved by the Committee for the Class of M.E.S. on the

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