

No. 1270 DON ENRIQUE

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 1231 No. in Register Book 1903

S.S. "FLYING. FOAM"

Makers of Engines FERGUSON BROS. LD

Works No. 219

Makers of Main Boilers CLYDE S. & E. CO LD.

Works No. 717

Makers of Donkey Boiler

Works No.

MACHINERY.



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No.

THE BRITISH CORPORATION FOR THE SURVEY  
AND  
REGISTRY OF SHIPPING.

Report No. 1301 No. in Register Book

Received at Head Office

Surveyor's Report on the New Engines, Boilers, and Auxiliary  
Machinery of the Steel Tug Boat

"Flying Foam"

Port of Registry

Glasgow

Registered Owners

Clyde Shipping Co. Ltd.  
Clyde

Surveyor's District

Date of Completion of Engines

2-17

" " " Main Boilers

2-17

" " " "Donkey"

Trial Run at

St. Kilmorie

Date

20-2-17

First Visit

1-3-15

Last Visit

24-2-17

Total Number of Visits

37

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## ENGINES.

Made by

Ferguson Bros (W. Glasgow) Ltd.

" at

Port. Glasgow

Works No.

219

Description

Compound, 2 Cyls.

No. of Cylinders, each Engine

2

Diars.

20" - 42"

Stroke

27"

Cub. feet in each L.P. Cylr.

21.65

Revs. per Min.

130

I.H.P.

823

Pressure in I.P. Receiver at full Power

2nd I.P.

L.P.

21

Thickness of Metal in H.P. Cylr.

1 1/8"

I.P.

"

"

"

18"

" " " " Liner

1 1/8"

"

"

"

"

1"

" " " " Valve Chest

1"

"

"

"

"

1"

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

Yes

each Receiver?

Yes

Number of Studs in H.P. Cylr. Cover

18

I.P.

2nd I.P.

L.P.

22

Eff. Diar.

"

"

942"

"

"

"

"

942"

Pitch

"

"

45/8"

"

"

"

"

67/8"

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

Slide

"

"

"

"

Slide

" Valve Gear

Link motion

Diameter of Piston Rods (p in part)

4 1/4"

At Bottom of Thread

3.287"

Makers

"

Steel Co of Scotland Ltd

Material

I.S.

Diameter of Connecting Rods (smallest part)

4 1/4"

Material

I.S.

Makers

"

Steel Co. of Scotland Ltd

Material

I.S.

Diar. of Crosshead Gudgeons

4 1/4"

Length of Bearing

2 @ 4 1/4"

Material

I.S.

No. of Top End Bolts (each Rod)

4

Effective Diar.

1.66"

Material

I.S.

" Bot. " "

2

"

2.037"

"

I.S.

" Main Bearings

4

Lengths

10"

"

I.S.

" Bolts in each

2

Effective Diar.

1.787"

Material

I.S.

No. of Holding Down Bolts, each Engine

26

No. of Metal Chocks

14

Eff. Diar.

"

"

942"

Average Pitch

11 1/2"

Are the Engines bolted directly to the Tank Top?

No tank

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

-

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

-

## SKETCHES.



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## SKETCHES.

## SHAFTING.

Are Crank Shafts Built? *Yes* No. of Lengths in each *one* Angle of Cranks *90°*  
 Diar. of Crank Shafts by Rule *8.06* Actual *8½"* Diar. in Way of Webs *8¾"*  
 Makers of *Steel Co of Scotland Ltd* Material *I.S.*  
 Diar. of Crank Pins *8½"* Diar. in Way of Web *8½"*  
 Makers of *Steel Co of Scotland Ltd* Material *I.S.*  
 Width across Crank Webs at Centre of Shaft *15¾"* Thickness *5¼"*  
 " " " " Crank Pins *15¾"* " *5¼"*  
 " " " " Narrowest part *5¼"*  
 Makers of Crank Webs *Steel Co. of Scotland Ltd* Material *I.S.*  
 Diar. or Breadth of Keys in Crank Webs *1½"* Length *4"*  
 " of Dowel Pins in Crank Pins *1* Length *3"* Screwed or Plain *Plain*  
 No. of Bolts in each Coupling *6* Diar. at Mid Length *2"* Diar. of Pitch Circle *13½"*  
 Material of Coupling Bolts *Steel*  
 Crank Shafts Finished by *Ferguson Bros*  
 Greatest Distance from edge of Main Bearing to Crank Web *¼"*  
 Description of Thrust Blocks *Adjustable*  
 Number " " Rings *7*  
 Diar. of Thrust Shafts by Rule *8.06"* Actual (at bot. of Collars) *8½"* Over Collars *14½"*  
 " " at Forward Coupling *8½"* After Coupling *8½"*  
 No. of Thrust Collars *7* Thickness *1½"* Distance apart *3¼"*  
 Thrust Shafts Forged by *Steel Co of Scotland Ltd* Material *I.S.*  
 " Finished by *Ferguson Bros*  
 Diar. of Intermediate Shafting by Rule *7.658"* Actual *7¾"*  
 No. of Lengths, each Engine *1* No. of Tunnel-Bearings *1*  
 Diar. of Bearings *8½"* Length *12"* Distance apart *10" 6 to m.B.*



No. of Bolts, each Coupling

Intermediate Shafts Forged by

" " Finished by

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?

Distance from After Bearing in Stern Tube to nearest Tunnel Bearing

Are the After Bearings lubricated with Oil or Sea Water?

What means are adopted to prevent Sea Water entering the Stern Tubes?

Propeller Shafts Forged by

" " Finished by

No. of Propellers

" Blades, each Propeller

Material of Blades

Surface, each Propeller

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

Diar. at Mid Length

Diar. of Pitch Circle

Material

Actual

At Couplings

Length of After Bearings

Lignum-vitæ

13'-0" crs.

Sea water

Material

Diar.

Pitch

Fitted or Solid

Boss

Diar. of Propeller

Rule Diar. of Crank Shaft=

## SKETCHES.



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## TURBINE ENGINES.

Type

No. of H.P. Turbines

No. of L.P. Turbines

No. of Astern

How arranged

Revolvs. 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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## PUMPS, ETC.

No. of Air Pumps 1  
 Type of " Edwards  
 Diar. of Air Pump Rod 2 1/4" Material Muntz metal  
 How are Air Pumps Worked? Levers on LP.

No. of Centrifugal Circulating Pumps 1  
 " Reciprocating " " 1  
 Diar. of Circulating Pump Rod 2 1/4" Material Muntz metal  
 How are Circulating Pumps Worked? Levers on LP.

No. of Centrifugal Circulating Pumps 1  
 " Reciprocating " " 1  
 Diar. of Circulating Pump Rod 2 1/4" Material Muntz metal  
 How are Circulating Pumps Worked? Levers on LP.

No. of Centrifugal Circulating Pumps 1  
 " Reciprocating " " 1  
 Diar. of Circulating Pump Rod 2 1/4" Material Muntz metal  
 How are Circulating Pumps Worked? Levers on LP.

No. of Feed Pumps on each Engine 1  
 Where do they pump from? Natural Boilers  
 " " discharge to? Yes  
 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 1  
 Where do they pump from? Bilges  
 " " discharge to? Overboard  
 Can one Pump be overhauled while the others are at work? Yes

No. of Bilge Injections connected to Condensers 1

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

Glyde &amp; Co. Ltd.

at

Port. Glasgow.

Works No.

717

Date when Plan approved

13-2-15

Boiler Plates, Iron or Steel

Steel

Makers of Shell Plates

James Dunlop &amp; Co.

Internal Plates

do

Furnaces

Leeds Forge &amp; Co.

Stay Bars

Lanarkshire Steel Co.

Rivets

Shell Steel by A.B.C. Co. iron.

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

B.T. &amp; B.C.

No. of Boilers

one

Single or Double-ended

Single

No. of Furnaces, each Boiler

3

Type of Furnaces

Dighton

Approved Working Pressure

130 lbs

Hydraulic Test Pressure

160 lbs

Date of Hydraulic Test

9-12-15

when Safety Valves set

15-2-17

Pressure on Valves

135 lbs.

Date of Steam Accumulation Test

15-2-17

Max. Pressure under Accumulation Test

138 lbs.

System of Draught

Natural

Can Boilers be worked separately?

15'-6"

Greatest inside Diam. of Boilers

12'-0"

Length

2061 sq

Square Feet of Heating Surface, each Boiler

62 sq

Grate



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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

2

3 1/4"

16.590

Yes

One

One

3

One

Yes  
Cocks  
Yes

One

2

14.81"

16 17"

17"

Drilled

Steel

Butt

Yes

13"

13 1/16"

machine

Treble

1 1/16"

7.5"

Strap 15 5/8"

85.84%



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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

Back machine - Front, hand.

 $1\frac{3}{16}$ "

3.48"

 $5\frac{7}{16}$ " $17" \times 13"$  $37\frac{3}{4} \times 33\frac{3}{4}$  $\frac{16.27}{16}$ " $16.5$ " $16.5$ " $\frac{16.5}{16}$ " $18\frac{1}{2} \times 19$ "

2.391"

2.59"

2.59"

Steel

Double nuts &amp; washers.

 $\frac{11.69}{16}$ " $12$ " $\frac{12}{16}$ "

Thickness of Doubling in Steam Space between Tubes

No. of Stays

Eff. Diar. of Stays by Rule

Approved

in Boilers

Material

Are Stays fitted with X's outside?

Thickness of Back End Plate at Bottom of Hole

Approved

in Boilers

Eff. Diar. of Stays at With Space between Tubes

Thickness of Doubling in

Thickness of Front End Plate at Bottom of Hole

Approved

in Boilers

No. of Loose Stays in Space between Tubes

Eff. Diar. of Stays by Rule

Approved

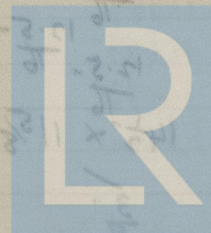
in Boilers

Material of

Thickness of Front End Plate at Bottom of Hole

Approved

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 " " " "

$$14\frac{1}{2} \times 8\frac{1}{4}$$

$$1.536$$

$$1.733$$

$$1.733$$

Iron

yes

$$11.9$$

$$\frac{12}{16}$$

$$12.5$$

$$\frac{12}{16}$$

$$14\frac{1}{2} \times 10$$

$$1$$

marhol

$$12.5$$

$$\frac{12}{16}$$

$$12.5$$

$$3$$

$$1.633$$

$$1.84$$

$$1.84$$

Steel

$$12.5$$

$$\frac{12}{16}$$

$$12.5$$

$$\frac{12}{16}$$

$$14\frac{1}{2} \times 11\frac{5}{8}$$

$$3$$

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

Are Stay Tubes fitted with Nuts at Front Ends?

Thickness of Back Tube Plates by Rule

Approved " " " "

in Boilers " " " "

Pitch of Stay Tubes in Back Tube Plates

" " " " " "

Thickness of Stay Tubes

" " " " " "

Eff. 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 " " " " " "

Approved " " " " " "

in Boilers " " " " " "

Eff. Diar. of Stay Tubes in " " " "

" " " " " "

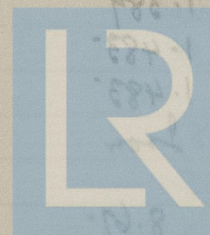
Approved " " " " " "

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 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

ho.

$$\frac{10.12}{16}$$

$$\frac{12}{16}$$

$$\frac{12}{16}$$

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

$$4\frac{3}{4} \times 4\frac{3}{4}$$

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

$$8 \text{ n.g.}$$

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

$$\text{Iron}$$

$$\frac{7.19}{16}$$

$$\frac{9}{16}$$

$$\frac{9}{16}$$

$$46\frac{1}{8}$$

$$7'-4"$$

$$45$$

$$\frac{8.85}{16}$$

$$\frac{9}{16}$$

$$\frac{9}{16}$$

$$8\frac{7}{8} \times 9$$

$$1.389$$

$$1.483$$

$$1.483$$

$$\text{Iron}$$

$$\frac{8.67}{16}$$

Thickness of Combustion Chamber Sides Approved

" " " in Boilers

Pitch of screw stay in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides by Rule

" " " Approved

" " " in Boilers

Pitch of screw stay in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

Are all screw stays fitted with nuts inside C.C.?

Thickness of Combustion Chamber Bottoms

No. of flanges over each web Chamber

" " " " " "

Depth and Thickness of flanges

Material of flanges

No. of stays 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

$\frac{9}{16}$ "  
 $\frac{9}{16}$ "  
 $9" \times 8\frac{1}{2}"$   
 $1.362"$   
 $1.483"$   
 $1.483"$   
 Iron

$8.88 -$   
 $\frac{9}{16}$ "  
 $\frac{9}{16}$ "  
 $9\frac{5}{8} \times 8\frac{1}{4}"$   
 $1.386"$   
 $1.483"$   
 $1.483"$   
 Iron

Yes  
 $\frac{3}{4}"$

5  
 4  
 $10\frac{1}{4}" \times 2 @ \frac{3}{4}"$   
 Steel  
 4

75  
 165  
 $16" \times 12"$

## 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 (from above fire grate)

Are boiler covers flat or domed?

Internal radius of flanged covers

Description of seams in boiler covers

Diam. of rivet holes

Height of rivet covers above fire grate

Are rivet covers flat or domed?

External radius of flanged covers

No. of cover stays

External diam. of flanges at top

No. of water tubes

Material of water tubes

No. of smoke pipes in flange sheet

Are they fitted with stay bolts?

## SUPERHEATERS

Description of superheater

When 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

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.

## REFRIGERATORS.



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## MAIN STEAM PIPES.

No. of Lengths	1	2		
Material	Copper	Copper		
Brazed, Welded, or Seamless	Stainless	Stainless		
Internal Diam.	5 3/4"	5 3/4"		
Thickness	7 w.g.	7 w.g.		
How are Flanges Secured?	Brazed	Brazed		
Date of Hydraulic Test	11-11-16	16-12-16		
Test Pressure	160 lbs	160 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?

Is the Machine Room 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

No. of Cylinders in which Pumps are provided on Main engine

Particulars of these Cylinders—

No. of Cylinders	Stroke (inches)	Number of Cylinders	Capacity (cubic feet)	Pressure (lb. per sq. in.)	Speed (R.P.M.)	Power (H.P.)	Remarks
2	20	16	11.88	7/8	950	1000	2 engines

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.

Copper Copper  
 Harder Harder  
 53 1/2 57 1/2  
 7 1/2 7 1/2  
 Braided Braided  
 11-11-6 16-12-6  
 16-12-6 16-12-6

## ELECTRIC LIGHTING.

Installation Fitted by

J. Charters Glasgow

No. and Description of Dynamos

one D.C. hand wound

Makers of Dynamos

Greenwood &amp; Batley

Capacity

700

Amperes, at

100

Volts,

2000

Revol. per Min.

Current Alternating or Continuous

Continuous

Position of Dynamos

Engine Room S. side

Main Switch Board

Beside dynamo

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

5

Particulars of these Circuits:—

No. of Circuit.	Name of Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density. <i>amps. D.</i>	Conductivity of Conductor.	Insulation Resistance <i>of circuits</i>
Engine Room	73	16		11.88	7/8	950	100%	2.0 meg
Ford accom.	11	16		6.16	3/8	1163	100%	3.0
Law & Wireless	20	16 + 32		19.04	1 1/2	1000	100%	1.2
Projection	circuit switch not wired.							

Insulation  
 resistance  
 of cables  
 per mile 2500

Total No. of Lights

54

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

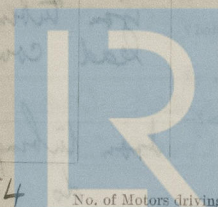
none

No. of Heaters

none

Current required for Motors and Heaters

none



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

1 Box in wheelhouse with 6 switches  
 1 " " engineers room 3

2

No. of Circuits	Name of Circuit	Number of Lamps	Current in Amperes	Size of Conductor	Current in Amperes	Size of Conductor	Current in Amperes	Size of Conductor	Current in Amperes	Size of Conductor
100	100	100	100	100	100	100	100	100	100	100

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. 17 S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

" " Saloons, State Rooms, &amp;c., " ?

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

(2) " " passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads

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

is unimpaired?

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.	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	

No. of Donkeys

Type "

Makers "

Single or Duplex

" Double-Acting

Diam. of Steam Cylinders

" Pumps

Stroke of "

Where do they pump from?

Where do they discharge to?

Capacity, Tons per Hour of Ballast Donkey

Diam. of Pipe required by Rule for

DONKEY

General Service

One

Fly Wheel - Vertical

John Cameron & Co. Ltd.

Single

Double

6"

3"

5"

Sea Tanks

Bridges (main + direct).

Deck, Overboard,

Condenser, Tanks.

## FEED WATER FILTERS.

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

## FORCED DRAUGHT FANS.

No. of Fans.	Diam.	Revs. per min.
How are Fans driven?		

## PUMPS.

Feed Pump.

One

Vertical

Worthington

Duplex

Double

6"

4"

6"

Afterpeak, Hotwell,

Condenser, Boiler, F.W. tank.

Boilers.

Dussey Circulator

One

Vertical

Gawson + Downie

Duplex

Double

5"

5"

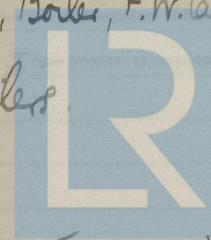
6"

Sea

Two Condenser.

largest Ballast Tank

Velocity of Water in Pipe



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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	6	" Valve Chest Cover Bolts Studs	6
" Feed Pump Valves	1 set	" Bilge Pump Valves	1 set
" Safety Valve Springs	1	" Fire Bars	1/4 set.
" Piston Rings		" Junk Ring Bolts Studs	
" Piston Rods		" Connecting Rods	
" Valve Spindles		" Air Pump "	
" Air Pump Valves	1 set.	" " " 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?

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

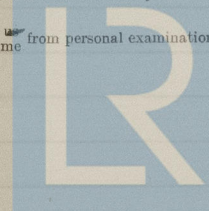
Is the Workmanship throughout thoroughly satisfactory?

Yes

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

"Flying Foam"

as ascertained by me from personal examination



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 Duncan & Arthur  
 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. :

£ :

## ENGINES.

L.P.O. Cub. ft. :

£ :

Testing, &amp;c. :

£ :

Expenses ... :

Total ... £ :

It is submitted that this Report be approved,

Chief Surveyor.

Approved by the Committee,

Fees applied for

Fees paid

Secretary.



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Form

ALIX THOMAS

M.S.

M.S.

G.S.

DONALD DOLAN

M.S.

M.S.

G.S.

BENJAMIN

T.E.C.

M.S.

Signed for

Expenditure

Total

It is submitted that this Report be approved.

Chief Clerk.

Approved by the Committee.

Form signed for

Form paid



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