

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. 1300 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

Colyde Shipping Co. Ltd.

Surveyor's District

Colyde

Date of Completion of Engines

2-17

" " " Main Boilers

2-17

" " " Donkey "

Trial Run at

Skalmorie

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 (Glasgow) Ltd.*
 " at *Port. Glasgow*
 Description *Compound, 2 Cyls.* Works No. *219*

No. of Cylinders, each Engine *2* Diars. *20" - 42"* Stroke *27"*
 Cub. feet in each L.P. Cylr. *21.65* Revols. 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 I.P. Cylr. *1 1/8"* I.P. *—* " *—* " *18"*
 " " " " Liner *1 1/8"* " *—* " *—* " *—*
 " " " 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"* " " " *—* " " " *—*
 Pitch " " " *45/8"* " " " *—* " " " *—*
 Type of I.P. Valves (Piston or Slide) *Slide* " " " *—* " " " *Slide*
 " Valve Gear *Link motion*

Diameter of Piston Rods (pin part) *4 1/4"* At Bottom of Thread *3.287"*
 Makers " *Steel bo of Scotland Ltd* Material *I.S.*

Diameter of Connecting Rods (smallest part) *4 1/4"* Material *I.S.*
 Makers " " *Steel bo. of Scotland Ltd*

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"*
 " Bolts in each *2* Effective Diar. *1.787"* Material *I.S.*

No. of Holding Down Bolts, each Engine

No. of Metal Chocks

Eff. Diar.

Are the Engines bolted directly to the Tank Top?

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 *J.S.*
 Diar. of Crank Pins *8½"* Diar. in Way of Web *8½"*
 Makers of *Steel Co of Scotland Ltd* Material *J.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 *J.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 *J.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" 6/16 to M.B.*

No. of Bolts, each Coupling 6
 Intermediate Shafts Forged by Steel Co. of Scotland Material S.S.
 Finished by Ferguson Bros.
 Diar. at Mid Length 2" Diar. of Pitch Circle 13 1/2"
 Diar. of Propeller Shafts by Rule 8.06" Actual 8 1/2" At Couplings 8 1/2"
 Are Propeller Shafts fitted with Continuous Brass Liners? Yes
 Diar. over Liners 10" Length of After Bearings 3'-3"
 Of what Material are the After Bearings composed? Lignum-vitae
 Distance from After Bearing in Stern Tube to nearest Tunnel Bearing 13'-0" approx.
 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 Steel Co. of Scotland Material S.S.
 Finished by Ferguson Bros.
 No. of Propellers 1 Diar. 9'-1" Pitch 12'-3"
 Blades, each Propeller 4 Fitted or Solid Fitted
 Material of Blades cast iron Boss cast iron
 Surface, each Propeller 76.6 sq ft Diar. of Propeller 13.65
 Rule Diar. of Crank Shaft =
 Coefficient of Displacement of Vessel at 1/2 Moulded Depth 53.

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
 2 1/4"
 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 Rods 1 1/2"
 Material Muntz metal
 How are Circulating Pumps Worked? levers LP.

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

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

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? -

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

Glyde & Co. Ltd. 135

" at

Port. Glasgow

Works No.

717

Date when Plan approved

23-2-15

Boiler Plates, Iron or Steel

Steel

Makers of Shell Plates

James Dunlop & Co

" Internal Plates

do

" Furnaces

Leeds Forge & Co.

" Stay Bars

Lanarkshire Steel Co.

" Rivets

Shell Steel by A. B. & Co. Cls iron.

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

B.T. & 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?

Greatest inside Diam. of Boilers

15'-6"

" " Length "

12'-0"

Square Feet of Heating Surface, each Boiler

2061 ♂

" Grate " "

62 ♂



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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 1/2" x 8 1/4"

1.536"

1.733"

1.733"

Iron

yes

11.9"

12 - 7/16

12 - 7/16

14 1/2" x 10"

-

manhole

12.5"

12.5"

3

1.633"

1.84"

1.84"

Steel

12.5"

12.5 - 7/16

12.5 - 7/16

14 1/2" x 11 5/8"

3"

3/8"



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Vertical handwritten notes on the right side of page 20, including '14 1/2 x 8 1/4', '1.536', '1.733', 'Iron', 'yes', 'manhole', '12.5', '3', '1.633', '1.84', '1.84', 'Steel', '12.5', '12.5 - 7/16', '14 1/2 x 11 5/8', '3', '3/8'.

Faint printed text on the right side of page 20, including 'are stays fitted with nuts outside?', 'Thickness of Back End Plates by Rule', 'Approved', 'in Boilers', 'Thickness of Front Tube Plates by Rule', 'Approved', 'in Boilers', 'Thickness of Front End Plates at Bottom by Rule', 'Approved', 'in Boilers', 'Length between Tube Plates', 'Width of Combustion Chambers (Front to Back)', 'Thickness of Tube Plates by Rule', 'Approved', 'in Boilers', 'Pitch of Stay Tubes in Stacks of Tubes', 'Thickness of Doublings in Stacks of Tubes', 'Pitch of Stay Tubes at Spaces between Stacks of Tubes'.

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

no.

$\frac{10.12}{16}$ $\frac{12}{16}$

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

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

$\frac{3}{8}$

8 n.c.

$3\frac{1}{2}$

Iron

$\frac{7.19}{16}$ $\frac{9}{16}$

$46\frac{1}{8}$

$7'-4"$

45"

$\frac{8.85}{16}$ $\frac{9}{16}$

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

1.389

1.483

1.483

Iron

$\frac{8.67}{16}$

Thickness of Combustion Chamber Sides Approved

in Boilers

Pitch of screw stays in C.C. tops

Eff. Diar. by Rule

Approved

in Boilers

Material

Thickness of Combustion Chamber Sides by Rule

Approved

in Boilers

Pitch of screw stays in C.C. tops

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 rivets over each W.C. Chamber

Depth and Thickness of Rivets

Material of Rivets

No. of stays in each

10 1/2 x 1 1/2

2

1

1/2



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Thickness of Combustion Chamber Sides Approved

 $\frac{9}{16}$ "

" " " " in Boilers

 $\frac{9}{16}$ "

Pitch of Screwed Stays in C.C. Sides

 $9" \times 8\frac{1}{2}"$

Eff. Diar. " " by Rule

1.362"

" " " Approved

1.483"

" " " in Boilers

1.483"

Material " "

Iron

Thickness of Combustion Chamber Backs by Rule

8.88-

 $\frac{9}{16}$ "

" " " Approved

 $\frac{9}{16}$ "

" " " in Boilers

Pitch of Screwed Stays in C.C. Backs

 $9\frac{5}{8}" \times 8\frac{1}{4}"$

Eff. Diar. " " by Rule

1.386"

" " " Approved

1.483"

" " " in Boilers

1.483"

Material " "

Iron

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

Yes

Thickness of Combustion Chamber Bottoms

 $\frac{3}{4}$ "

No. of Girders over each Wing Chamber

5

" " " Centre "

4

Depth and Thickness of Girders

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

Material of Girders

Steel

No. of Stays in each

4

No. of Stay Tubes, each Boiler

75

" " Plain " "

165

Size of Lower Manholes

 $16" \times 12"$

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 stays (cross stay or radial)?

Internal radius of flanged heads

Description of seams in boiler crown

Diameter of crown stays

Height of flange crown above fire grate

Are stays (cross stay or radial)?

Internal radius of flanged crown

No. of crown stays

External diam. of flange at top

No. of water tubes

Material of water tubes

No. of staywires in flange diam.

Are they fitted with caps?

SUPERHEATERS

Description of superheater

When installed

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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

Diam. 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 Diam.

Material

External Diam. of Firebox at Top

Bottom

Thickness of Plates

No. of Water Tubes

Int. Diam.

" "

Material of Water Tubes

No. of Screwed Stays in Firebox Sides

Eff. Diam.

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.

Diam.

Area

Are " " fitted with Easing Gear ?

Date of Hydraulic Test

Test Pressure

Date when Safety Valves set

Pressure on Valves

SKETCHES.

No. of Boilers	1	No. of Boilers	1
Material	Cast Iron	Material	Cast Iron
Height of Crown above Grate	1-362	Height of Crown above Grate	1-362
Internal Diam.	1-483	Internal Diam.	1-483
External Radius of Dished Ends	1-483	External Radius of Dished Ends	1-483
Thickness of Plates	1/2"	Thickness of Plates	1/2"
Description of Seams	Double Riveted	Description of Seams	Double Riveted
Diam. of Rivet Holes	3/8"	Diam. of Rivet Holes	3/8"
Pitch	2"	Pitch	2"
Width of Overlap	1/2"	Width of Overlap	1/2"
Height of Firebox Crowns	1-362	Height of Firebox Crowns	1-362
Are Firebox Crowns Flat or Dished ?	Flat	Are Firebox Crowns Flat or Dished ?	Flat
External Radius of Dished Crowns	1-362	External Radius of Dished Crowns	1-362
Thickness of Plates	1/2"	Thickness of Plates	1/2"
No. of Crown Stays	4	No. of Crown Stays	4
Effective Diam.	1/2"	Effective Diam.	1/2"
Material	Cast Iron	Material	Cast Iron
External Diam. of Firebox at Top	1-362	External Diam. of Firebox at Top	1-362
Bottom	1-362	Bottom	1-362
Thickness of Plates	1/2"	Thickness of Plates	1/2"
No. of Water Tubes	4	No. of Water Tubes	4
Int. Diam.	1/2"	Int. Diam.	1/2"
" "	1/2"	" "	1/2"
Material of Water Tubes	Cast Iron	Material of Water Tubes	Cast Iron
No. of Screwed Stays in Firebox Sides	4	No. of Screwed Stays in Firebox Sides	4
Eff. Diam.	1/2"	Eff. Diam.	1/2"
Material	Cast Iron	Material	Cast Iron
Are they fitted with Nuts inside ?	Yes	Are they fitted with Nuts inside ?	Yes
Outside ?	Yes	Outside ?	Yes

REFRIGERATORS

No. of Boilers	1	No. of Boilers	1
Material	Cast Iron	Material	Cast Iron
Height of Crown above Grate	1-362	Height of Crown above Grate	1-362
Internal Diam.	1-483	Internal Diam.	1-483
External Radius of Dished Ends	1-483	External Radius of Dished Ends	1-483
Thickness of Plates	1/2"	Thickness of Plates	1/2"
Description of Seams	Double Riveted	Description of Seams	Double Riveted
Diam. of Rivet Holes	3/8"	Diam. of Rivet Holes	3/8"
Pitch	2"	Pitch	2"
Width of Overlap	1/2"	Width of Overlap	1/2"
Height of Firebox Crowns	1-362	Height of Firebox Crowns	1-362
Are Firebox Crowns Flat or Dished ?	Flat	Are Firebox Crowns Flat or Dished ?	Flat
External Radius of Dished Crowns	1-362	External Radius of Dished Crowns	1-362
Thickness of Plates	1/2"	Thickness of Plates	1/2"
No. of Crown Stays	4	No. of Crown Stays	4
Effective Diam.	1/2"	Effective Diam.	1/2"
Material	Cast Iron	Material	Cast Iron
External Diam. of Firebox at Top	1-362	External Diam. of Firebox at Top	1-362
Bottom	1-362	Bottom	1-362
Thickness of Plates	1/2"	Thickness of Plates	1/2"
No. of Water Tubes	4	No. of Water Tubes	4
Int. Diam.	1/2"	Int. Diam.	1/2"
" "	1/2"	" "	1/2"
Material of Water Tubes	Cast Iron	Material of Water Tubes	Cast Iron
No. of Screwed Stays in Firebox Sides	4	No. of Screwed Stays in Firebox Sides	4
Eff. Diam.	1/2"	Eff. Diam.	1/2"
Material	Cast Iron	Material	Cast Iron
Are they fitted with Nuts inside ?	Yes	Are they fitted with Nuts inside ?	Yes
Outside ?	Yes	Outside ?	Yes



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MAIN STEAM PIPES.

No. of Lengths	1	2		
Material	Copper Stainless	Copper Stainless		
Brazed, Welded, or Seamless				
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	26-12-16		
Test Pressure	260 lbs	260 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

No. of Cranks to which Steamers are provided on this engine (if any)

Particulars of these Cranks:—

Stroke	Length	Weight	Speed	Pressure	Temperature	Quantity	Quality	Remarks
28"	16"	11.88	7/8	950	100%	2		

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
 20-25
 11-11-1/2 20-25
 20-25 20-25

ELECTRIC LIGHTING

Installation Fitted by J. Charters Glasgow
 No. and Description of Dynamos one D.C. 2 pound wound
 Makers of Dynamos Greenwood & Batley
 Capacity 700 Amperes, at 100 Volts, 2000 Revols. 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. amps. D.	Conductivity of Conductor.	Insulation Resistance of circuits.
Engine Room	73 ←	16 ←		11.88	7/8	950	100%	2.0 meg
Food accom.	11 ←	16 ←		6.16	3/8	1163	100%	3.0 "
Law & Wireless	20 ←	16 3/2 ←		19.04	19/20	1000	100%	1.2 -
Projection	circuit switched not wired.							

Insulation resistance of cables per mile 2500

Total No. of Lights 54 No. of Motors driving Fans, &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 Beside dynamo
 2

No. of Circuits to which switches are provided on Main Switch Board	Main Switch Board	Location of Dynamos	Current Alternation or Continuous	Capacity	Makers of Dynamos	No. and Description of Cables	Installation
11	11	11	11	11	11	11	11

Are Cut-outs fitted as follows?—
 On Main Switch Board, to Cables of Main Circuits *Yes*
 On Aux. " " each Auxiliary Circuit *Yes*
 Wherever a Cable is reduced in size *Yes*
 To each Lamp Circuit *Yes*
 To both Flow and Return Wires of all Circuits when the Double-Wire system is adopted *Yes*
 Are the Fuses of Standard Sizes? *Carrier type fuses.*
 Are all Switches and Cut-outs constructed of Non-inflammable Material? *Yes*
 Are they placed so as to be always and easily accessible? *Yes*
 Smallest Single Wire used, No. *18* S.W.G., Largest, No. *17* S.W.G.
 How are Conductors in Engine and Boiler Spaces protected? *iron tubing lead covered*
 " " Saloons, State Rooms, &c., " ?
 What special protection is provided in the following cases?—
 (1) Conductors exposed to Heat or Damp *Iron tubing*
 (2) " " passing through Bunkers or Cargo Spaces *do*
 (3) " " Deck Beams or Bulkheads *do*

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

is unimpaired? *No joints*

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

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

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

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

Has the Insulation Resistance over the whole system been tested? *Yes*

What does the Resistance amount to? *See parties of circuits* Ohms.

Is the Installation supplied with a Voltmeter? *Yes*

" " " an Ampere Meter? *Yes*

Date of Trial of complete Installation *22-2-17* Duration of Trial *6 hours*

Handwritten notes and signatures, including 'ROCKEY' and 'L. W. ...'



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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

DONKEY

No. of Donkeys
 Type
 Makers
 Single or Duplex
 Double-Acting
 Diar. of Steam Cylinders
 Pumps
 Stroke of
 Where do they pump from?
 Where do they discharge to?
 Capacity, Tons per Hour of Ballast Donkey
 Diar. of Pipe required by Rule for

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.

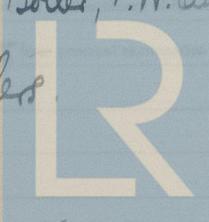
No. Type Size
 Makers
 Working Pressure Test Pressure Date of Test

FORCED DRAUGHT FANS.

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

PUMPS.

Feed Pump.
 one
 Vertical
 Worthington
 Duplex
 Double
 6"
 4"
 6"
 Afterpeak, Hotisell,
 Condenser, Boiler, F.W. tank.
 Boilers.
 Dusey Circulator
 one
 Vertical
 Dawson + Downie
 Duplex
 Double
 5"
 5"
 6"
 Sea
 Two Condenser.



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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:—

Handwritten notes and signatures in the left margin, including "Cylinder Bolts", "Crosshead Bushes", "Propeller Shafts", "Blades", "Condenser Tubes", "Air Pump Valves", "Safety Valve Springs", "Feed Pump Valves", "Coupling Bolts", "Main Bearing Bolts", "Piston Rings", "Piston Rods", "Valve Spindles", "Crank Pin Bushes", "Crank Shafts", "Propellers", "Boiler Tubes", "Junk Ring Bolts Studs", "Connecting Rods", "Air Pump", "Buckets", "Crosshead Bushes", "Propeller Shafts", "Blades", "Condenser Tubes".

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

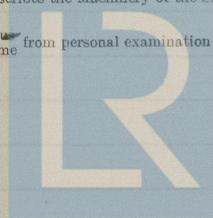
Surveyor

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



Spencer Arthur
 Lloyd's Register
 Engineer Surveyor to the British Corporation for the
 Survey and Registry of Shipping.

Fees—

GENERAL CONSTRUCTION

MAIN BOILERS.

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

DONKEY BOILERS.

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

£ : :

ENGINES.

L.P.C. Cub. ft. : :

£ : :

Testing, &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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