

No. 1273

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1237 No. in Register Book 1917

ANNA LIFFEY
EX
S.S. "FLYING SPRAY"

Makers of Engines FERGUSON BROS LD.

Works No. 220

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

Works No. 722

Makers of Donkey Boiler -

Works No. -

MACHINERY.



© 2021

Lloyd's Register
Foundation

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 109 No. in Register Book

Received at Head Office

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

"Flying Spray"

Port of Registry

Glasgow

Registered Owners

Colyde Shipping Co. Ltd.

Surveyor's District

Colyde

Date of Completion of Engines

4-17

" " " Main Boilers

4-17

" " " Donkey

Trial Run at

Skelmorie

Date *7-4-17*

First Visit

1-3-15

Last Visit

7-4-17

Total Number of Visits

40



© 2021

Lloyd's Register
Foundation

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 *L.S.*
 Diar. of Crank Pins *8½"* Diar. in Way of Webs *8½"*
 Makers of *Steel Co. of Scotland Ltd.* Material *L.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 *L.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 Ltd.*
 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 *1* Thickness *1½"* Distance apart *3¼"*
 Thrust Shafts Forged by *Steel Co. of Scotland Ltd.* Material *L.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 *40' 6" to m/f.*

No. of Bolts, each Coupling 6
 Intermediate Shafts Forged by Steel ls of Scotland
 Finished by Ferguson Bros. Ld.
 Diar. of Propeller Shafts by Rule 8.06" Actual 8½" At Couplings 8½"
 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" crs.
 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 ls of Scotland
 Finished by Ferguson Bros. Ld.
 No. of Propellers 1 Diar. 9'-1" Pitch 12'-3"
 Blades, each Propeller 4 Fitted or Solid Fitted
 Material of Blades best Iron Boss best Iron
 Surface, each Propeller 26.66 Diar. of Propeller 13.65
 Coefficient of Displacement of Vessel at ½ Moulded Depth .53

SKETCHES.



© 2021

Lloyd's Register
 Foundation

6 TURBINE ENGINES.

Type

No. of H.P. Turbines

No. of L.P. Turbines

No. of Astern "

How arranged

Revolts. 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.



© 2021

Lloyd's Register
Foundation

SKETCHES.

SKETCHES.

137
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100

11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100

4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100

137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200



PUMPS, ETC.

No. of Air Pumps 1 Diar. 14" Stroke 13½"
 Type of " Edwards
 Diar. of Air Pump Rod 2½" Material Muntz metal
 How are Air Pumps Worked? Levers on LP.

No. of Centrifugal Circulating Pumps - Maker
 " Reciprocating " " 1 Diar. 11" Stroke 13½"
 Diar. of Circulating Pump Rods 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 1 Diar. 3" Stroke 13½"
 Where do they pump from? Hotwell
 " " discharge to? Boilers
 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 Diar. 3" Stroke 13½"
 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



© 2021

Lloyd's Register
Foundation

BOILERS

Boilers made by *W. & A. Ltd*
 at *Port-Glasgow*
 Works No. *722*
 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 R.B. & Co. El rivets iron.*
 Material tested by (B.C., B.T., etc.) *B.C. & B.O.T.*
 No. of Boilers *One*
 Single or Double-ended *Single*
 No. of Furnaces, each Boiler *3*
 Type of Furnaces *Daington*
 Approved Working Pressure *130 lbs*
 Hydraulic Test Pressure *160 lbs*
 Date of Hydraulic Test *9-12-15*
 when Safety Valves set *29-3-17*
 Pressure on Valves *135 lbs*
 Date of Steam Accumulation Test *140 lbs.*
 Max. Pressure under Accumulation Test *X 6-4-17*
 System of Draught *Natural*
 Can Boilers be worked separately? *15-6"*
 Greatest inside Diam. of Boilers *12-0"*
 Length *2061 #*
 Square Feet of Heating Surface, each Boiler *62 #*
 Grate



© 2021

Lloyd's Register
Foundation

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" x 13"

$37\frac{3}{4}$ " x $33\frac{3}{4}$ "

$\frac{16.27}{16}$

16.5"

$\frac{16.5}{16}$

$18\frac{1}{2}$ " x 19"

2.391"

2.591"

2.59"

Steel
Double nuts washers

$\frac{11.69}{16}$

$\frac{12}{16}$ "

$\frac{12}{16}$ "



© 2021
Lloyd's Register
Foundation

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 1/16"

12 1/16"

14 1/2" x 10"

-

-

Manhole

12.5

12.5

3

1.633"

1.84"

1.84"

Steel

-

12.5

12.5

12.5

14 1/2" x 11 5/8"

-

3/8"



© 2021 Lloyd's Register Foundation

Are Stay Tubes fitted with Nuts at Front End?

no

Thickness of Back Tube Plates by Rule

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

Approved

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

in Boilers

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

Pitch of Stay Tubes in Back Tube Plates

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

Plain

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

Thickness of Stay Tubes

$$3\frac{1}{8}$$

Plain

$$8 \text{ no.}$$

External Diar. of Tubes

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

Iron

Material

Thickness of Furnace Plates by Rule

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

Approved

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

in Boilers

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

Smallest outside Diar. of Furnaces

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

Length between Tube Plates

$$7-4$$

Width of Combustion Chambers (Front to Back)

$$45$$

Thickness of Tops, by Rule

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

Approved

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

in Boilers

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

Pitch of Screwed Stays in C.C. Tops

$$1.389$$

E.E. Diar. by Rule

$$1.483$$

Approved

$$1.483$$

in Boilers

Material

Iron

Thickness of Combustion Chamber Sides by Rule

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



© 2021 Lloyd's Register Foundation

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Eff. Diar. " " by Rule

" " " Approved

" " " in Boilers

Material " "

9 7/16"
9 7/16"
9" x 8 1/2"
1.362"
1.483"
1.483"
Iron

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 " "

8 5/8"
9 7/16"
9 7/16"
9 5/8" x 8 1/4"
1.386"
1.483"
1.483"
Iron

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

Yes
3/4"
5
4
10 1/4" x 2 @ 3/4"
Steel
4
75
165
16" x 12"

VERTICAL DOCKERY BOILERS

If the boiler is vertical the following particulars should be added in addition to those on

previous pages applicable to such boilers.

Type of boiler

Height of boiler (rows above the grate)

Are boiler covers flat or domed?

Internal diameter of boiler

Description of seams in boiler covers

Dist. of lower boiler

Height of furnace (rows above the grate)

Are furnace covers flat or domed?

Internal diameter of boiler

Effective diar.

External diam. of boiler at top

Dist. of water tubes

Material of water tubes

No. of horizontal stays in furnace sides

Are they fitted with nuts inside?

SUPERHEATERS

Description of superheater

When erected

© 2021



Lloyd's Register Foundation

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. MAIN

No. of Boilers
 Material
 Name, Weight or Section
 Internal Diam.
 How are Flanges Secured?
 Date of Hydraulic Test
 Test Pressure

Handwritten notes:
 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100

REFRIGERATORS

No. of Machines
 Material
 Name
 Total Cubic Capacity of Refrigerated Space
 Nature Construction Thickness Insulation
 Date of Test
 Test Pressure



© 2021
 Lloyd's Register
 Foundation

MAIN STEAM PIPES.

No. of Lengths	1	2
Material	Copper	
Brazed, Welded, or Seamless	Seamless	
Internal Diam.	5 $\frac{3}{4}$ "	5 $\frac{3}{4}$ "
Thickness	7 mg.	7 mg.
How are Flanges Secured?	Brazed	
Date of Hydraulic Test	2-3-17	12-3-17
Test Pressure	760 lb	760 lb

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 Refrigerating Machines

Particulars of each Machine

Description of each Machine

No. of Machines

Description

Material

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



© 2021

Lloyd's Register
Foundation

SKETCHES.

ELECTRIC LIGHTING.

Installation Fitted by

J. Skarlers

No. and Description of Dynamos

5 one Compound wound
8 Newtons hd.

Makers of Dynamos

Capacity

40

Amperes, at

100

Volts,

350

Revs. per Min.

Current Alternating or Continuous

Continuous

Position of Dynamos

Starting Platform Starboard
Close to dynamo

,, Main Switch Board

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

5 (on 2/pole)

Particulars of these Circuits:—

No. of Circuit.	Name of Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density. \square "	Conductivity of Conductor.	Insulation Resistance of circuit.
1	Food Ace	10	16	5.6	$\frac{7}{2\frac{1}{2}}$	1005	100%	5.0 meg
2	Chute	8	32	8.96	$\frac{7}{20}$	1280	"	on 10.0.
3	havi: galion	13	16+32	11.2	$\frac{7}{8}$	890	"	.8
4	Engin Room light	24	16	13.4	$\frac{7}{8}$	1072	"	8.0

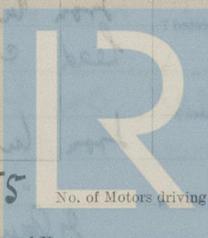
Total No. of Lights

55

No. of Motors driving Fans, &c.

No. of Heaters

Current required for Motors and Heaters



© 2021

Lloyd's Register
Foundation

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

One beside main switch board 3 switches
 One in wheelhouse 8

*wooden mounted
 hanging in
 main switch board
 No. of Circuits to which switches are provided on Main switch board
 (page no) 2*

No. of Circuits	Name of Circuit	Number of Lights	Power	Current	Size of Conductors	Material of Insulation
1	Port	10	10	2.2	1/2"	rubber
2	Star	8	8	1.8	1/2"	rubber
3	Star	13	13	1.8	1/2"	rubber
4	Star	13	13	1.8	1/2"	rubber

Are Cut-outs fitted as follows?—

On Main Switch Board, to Cables of Main Circuits

yes
 yes

On Aux. " " each Auxiliary Circuit

yes
 yes

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

yes

Are the Fuses of Standard Sizes?

tin wire

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.

1/8

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

glands

(3) " " Deck Beams or Bulkheads

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?

S.W.

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?

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 (see list of circuits)

What does the Resistance amount to?

do

Ohms

Is the Installation supplied with a Voltmeter?

yes

" " " an Ampere Meter?

yes

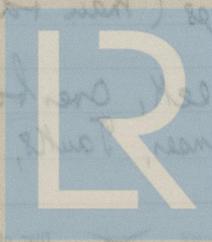
Date of Trial of complete Installation

7-4-17

Duration of Trial

6 hours

*General Services
 one
 The wheel
 from
 1/2"*



© 2021
 Lloyd's Register
 Foundation

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	General Service
Type	one Fly wheel Vertical
Makers	John Cameron
Single or Duplex	Single
Double-Acting	Double
Diar. of Steam Cylinders	6
Pumps	3
Stroke of	5
Where do they pump from?	Sea, Tanks Bilges (main direct)

Where do they discharge to?

Deck, Overboard,
Condenser, Tanks, Boilers

Capacity, Tons per Hour of Ballast Donkey

Diar. of Pipe required by Rule for

FEED WATER FILTERS.

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

FORCED DRAUGHT FANS.

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

PUMPS.



© 2021

Lloyd's Register
Foundation

largest Ballast Tank

Velocity of Water in Pipe

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:—

*The whole one
with bearings etc etc
Boiler
6
3
1*

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

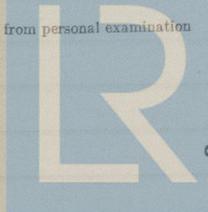
Are the Materials used in the Construction of Engines and Boilers, so far as could be seen, sound and trustworthy? *Yes*

Is the Workmanship throughout thoroughly satisfactory? *Yes*

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

as ascertained by me from personal examination

*Yes
"Flying Spray"*



Blucault
Lloyd's Register
Engineer Surveyor to the British Corporation for the
Survey and Registry of Shipping
Foundation



© 2021

Lloyd's Register
Foundation



© 2021

Lloyd's Register
Foundation



© 2021

Lloyd's Register
Foundation



© 2021

Lloyd's Register
Foundation