

No. 1559

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1543 No. in Register Book 2755

S.S. ELLENA

Makers of Engines A HALL & COY LTD

Works No. 273

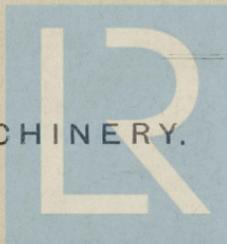
Makers of Main Boilers A HALL & COY LTD

Works No. 263

Makers of Donkey Boiler NONE

Works No. —

MACHINERY.



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No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
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Report No. 1543 No. in Register Book 2755

Received at Head Office.....

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ^{Single Triple}~~Single~~ ^{Crown}~~Crown~~ Screw TRAWLER.

ELLEINA.

Official No. 141961 Port of Registry Fleetwood

Registered Owners Clifton Steam Landers Ltd
Fleetwood

Engines Built by A HALL & COY LTD

at ABERDEEN.

Main Boilers Built by A HALL & COY LTD.

at ABERDEEN.

Donkey " " NONE

at

Date of Completion

7-12-21

First Visit

7-4-20

Last Visit

7-12-21

Total Visits

66



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RECIPROCATING ENGINES.

Works No. **273** No. of Sets **1** Description **Triple Expansion**
Surface Condensing

No. of Cylinders each Engine **3** No. of Cranks **3**
 Diars. of Cylinders **13", 22, 36,** Stroke **27"**
 Cubic feet in each L.P. Cylinder **15.89**
 Are Spring-loaded Relief Valves fitted to Top and Bottom of each Cyl.? **Yes**
 " " " each Receiver? **Yes**
 Type of H.P. Valves, **Piston Valve**
 " 1st I.P., **Andrews & Cameron** **Balanced Valve**
 " 2nd I.P.,
 " L.P., **Ordinary D Type.**
 " Valve Gear **Double Bar type**
 " Condenser **Round Mild Steel** Cooling Surface **600** sq. ft.
 Diameter of Piston Rods (plain part) **3 3/4"** Screwed part (bottom of thread) **2 3/4" DIA.**
 Material " **Mild Steel**
 Diar. of Connecting Rods (smallest part) **3 3/4"** Material **Scrap.**
 " Crosshead Gudgeons **4"** Length of Bearing **3 3/4" x 2** Material **Steel**
 No. of Crosshead Bolts (each) **4** Diar. over Thrd. **1 1/2"** Thrds. per inch **6** Material **Mild Steel**
 " Crank Pin " **2** " **2 3/8"** " **6** " **Mild Steel**
 " Main Bearings **6** Lengths **7 1/2"**
 " Bolts in each **2** Diar. over Thread **1 3/4"** Threads per inch **5** Material **M.S.**
 " Holding Down Bolts, each Engine **56"** Diar. **1"** No. of Metal Checks
 Are the Engines bolted to the Tank Top or to a Built Seat? **To Built Seat**
 Are the Bolts tapped through the Tank Top and fitted with Nuts Inside **Coal Holes in Seatings**
 If not, how are they fitted? **Nuts on Bottom & Lock Nut**
on top side of Soleplate.

Connecting Rods, Forged by **J. Carmichael & Coy Ltd Dundee**
 Piston " " **Steel Bar. Paul & Co Lead.**
 Crossheads, " **J. Carmichael & Coy Ltd Dundee**
 Connecting Rods, Finished by **A. Hall & Co Ltd**
 Piston " " **A. Hall & Co Ltd.**
 Crossheads, " **A. Hall & Coy Ltd.**
 Date of Harbour Trial **8-11-21**
 " Trial Trip **5-12-21**
 Trials run at **Aberdeen.**
 Were the Engines tested to full power under Sea-going conditions? **No.**
 If so, what was the I.H.P.? **545** Revols. per min. **114**
 Pressure in 1st I.P. Receiver, **170** lbs., 2nd I.P., **55** lbs., L.P., **8.5** lbs., Vacuum, **24.5** ins.
 Speed on Trial **10 Knots by Log.**
 If the Conditions on Trial were such that full power records were not obtained give the following estimated data:—
 Builders' estimated I.H.P. **580** Revols. per min. **112**
 Estimated Speed **11 Knots**

Trial - Heavy Swell. Misty Propeller inclined to star
hence the 114 Revolutions.



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Connecting Bolt forged by
 p. Chamberlain & Co. of the
 Works No. 100
 Connecting Bolt forged by
 p. Chamberlain & Co. of the
 Works No. 100
 Date of Harbour Trial
 Trial Trip
 Trials run at
 Speed on Trial
 Turbine Spindles forged by
 Wheels forged or cast by
 Reduction Gear Shafts forged by
 Wheels forged or cast by

TURBINE ENGINES.

Works No.	Type of Turbines	No. of H.P. Turbines	No. of I.P.	No. of L.P.	No. of Astern
-----------	------------------	----------------------	-------------	-------------	---------------

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

Is Single or Double Reduction Gear employed?

Revs. per min. of H.P. Turbines at Full Power

"	"	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

Turbine Spindles forged by

" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

DESCRIPTION OF INSTALLATION.



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TURBINE ENGINES

Works No. _____
 Type of Turbine _____
 No. of H.P. Turbines _____
 No. of L.P. _____
 No. of Steam _____

Are the Turbine Shafts driven direct by the Turbines or through Gearings?

In Single or Double Reduction Gear employed?

Revol per min. of H.P. Turbines at Full Power

.....

.....

.....

.....

.....

Total shaft Horse Power

Date of Harbour Trial

.....

.....

.....

Turbine Shafts driven by

.....

.....

.....

DESCRIPTION OF INSTALLATION

TURBO-ELECTRIC PROPELLING MACHINERY

No. of Turbo-propellers _____

Capacity of each _____

Type of Turbine employed _____

Description of Generator _____

.....

.....

.....

.....

No. of Motors driving Propeller Shafts _____

Are the Propeller Shafts driven direct by the Motors or through Gearings?

In Single or Double Reduction Gear employed?

Description of Motors _____

Revol per min. of Generator at Full Power

.....

.....

Date of Harbour Trial

.....



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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

Revs. per min. of Generators at Full Power

„ „ Motors „

„ „ Propellers „

Total Shaft Horse Power „

Date of Harbour Trial

„ Trial Trip

Trials run at

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



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No. of Blades each Propeller **4** Ritted or Solid? **Solid**
 Material of Blades **C.I.** Boss **C.I.**
 Diam. of Propellers **8'-9"** Pitch **11'-6"** Surface (each) **32** S. ft.
 Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth **.555**

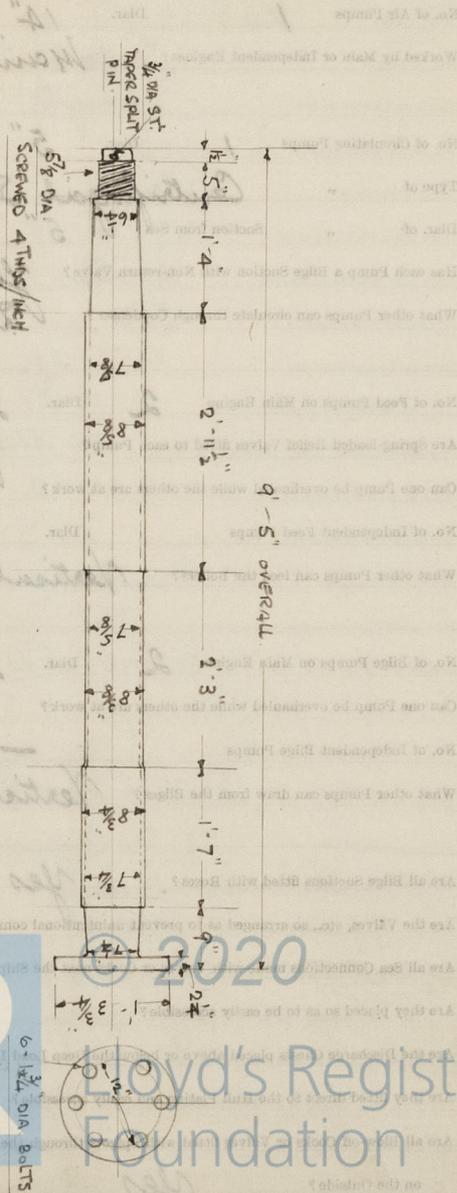
Crank Shafts Forged by	<i>The Life Forge Coy Ltd</i>	Material	<i>Iron Steel</i>
" Pins "	<i>do</i>	" "	<i>Iron Steel</i>
" Webs "	<i>do</i>	" "	<i>Hammered Scrap</i>
Thrust Shafts "	<i>do</i>	" "	<i>M.S.</i>
Intermed. ,, "	<i>do</i>	" "	<i>M.S.</i>
Propeller ,, "	<i>do</i>	" "	<i>Hammered Scrap</i>
Crank ,, Finished by	<i>do</i>		
Thrust ,, "	<i>A. Hull & Co Ltd</i>		
Intermed. ,, "	<i>do</i>		
Propeller ,, "	<i>do</i>		

STAMP MARKS ON SHAFTS.

B.C. TEST	#Crank Shaft-
70 3234	1 Thrust "
T.L.	1 Intermed. "
11-2-21	1 Scil "

(T&L)
LR

SKETCH OF PROPELLER SHAFT.



SECTION OF SHAFTS PUMPS, ETC.

No. of Air Pumps *1* Diar. *14"* Stroke *14"*
 Worked by Main or Independent Engines? *Main*

No. of Circulating Pumps *1* Diar. *5"* Stroke *—*
 Type of *Centrifugal Steam Driven*
 Diar. of *Suction from Sea 5"*

Has each Pump a Bilge Suction with Non-return Valve? *Yes* Diar. *—*
 What other Pumps can circulate through Condenser? *Donkey*

No. of Feed Pumps on Main Engine *2* Diar. *2½"* Stroke *14"*
 Are Spring-loaded Relief Valves fitted to each Pump? *Yes*
 Can one Pump be overhauled while the others are at work? *Yes*

No. of Independent Feed Pumps Diar. Stroke
 What other Pumps can feed the Boilers? *Vertical Feed Donkey Pumps*

No. of Bilge Pumps on Main Engine *2* Diar. *2½"* Stroke *12*
 Can one Pump be overhauled while the others are at work? *Yes*

No. of Independent Bilge Pumps *—*
 What other Pumps can draw from the Bilges? *Vertical Ballast Donkey*

Are all Bilge Suctions fitted with Roses? *Yes*
 Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges? *Yes*

Are all Sea Connections made with Valves or Cocks next the Ship's sides? *Yes*
 Are they placed so as to be easily accessible? *Yes*
 Are the Discharge Chests placed above or below the Deep Load Line? *above*
 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*

BOILERS

Dry Stale



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BOILERS.

Works No. **263**

No. of Boilers **1** Type **Scotch Multitubular**

Single or Double-ended **Single**

No. of Furnaces in each **3**

Type of Furnaces **Plain**

Date when Plan approved **28-4-19.**

Approved Working Pressure **180 lbs.**

Hydraulic Test Pressure **300**

Date of Hydraulic Test **16-2-21.**

„ when Safety Valves set **8-11-21**

Pressure at which Valves were set **180 lbs.**

Date of Accumulation Test **8-11-21**

Maximum Pressure under Accumulation Test **187 lbs.**

System of Draught **Natural**

Can Boilers be worked separately? **Yes**

Makers of Plates **D. Colville**

„ Stay Bars **Messrs The Steel Company of Scotland**

„ Rivets **R. B. & Nut Coy.**

„ Furnaces **A. & Craig**

Greatest Internal Diam. of Boilers **13'-6"**

„ „ Length „ **10'-6"**

Square Feet of Heating Surface each Boiler **1697.**

„ „ Grate „ „ **50.6**

No. of Safety Valves each Boiler **1 Double** Diam. **2 3/4**

Are the Safety Valves fitted with Easing Gear? **Yes**

No. of Pressure Gauges, each Boiler **1** No. of Water Gauges **1**

„ Test Cocks „ **2** „ Salinometer Cocks **1**

1307 Test Mark.

3231

TP **360 lbs.**

WP **180 LBS.**

16/2/21.



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

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

Are these Pipes connected to Boilers by Cocks or Valves? *Yes*

Are Blow-off Cocks or Valves fitted on Boiler Shells? *Yes*

No. of Strakes of Shell Plating in each Boiler *1*

Plates in each Strake *2*

Thickness of Shell Plates Approved *1 3/32"*

in Boilers *1 3/32"*

Are the Rivets Iron or Steel? *Steel*

Are the Longitudinal Seams Butt or Lap Joints? *Butt*

Are the Butt Straps Single or Double? *Double*

Are the Double Butt Straps of equal width? *Yes*

Thickness of outside Butt Straps *1 1/16"*

inside *1 1/16"*

Are Longitudinal Seams Hand or Machine Riveted? *Machine*

Are they Single, Double, or Treble Riveted? *Double*

No. of Rivets in a Pitch *2*

Diar. of Rivet Holes *1 3/16"* Pitch *8 5/8"*

No. of Rows of Rivets in Centre Circumferential Seams *-*

Are these Seams Hand or Machine Riveted? *-*

Diar. of Rivet Holes *-* Pitch *-*

No. of Rows of Rivets in Front End Circumferential Seams *2*

Are these Seams Hand or Machine riveted? *Hand*

Diar. of Rivet Holes *1 5/16"* Pitch *3 1/2"*

No. of Rows of Rivets in Back End Circumferential Seams *2*

Are these Seams Hand or Machine Riveted? *Machine*

Diar. of Rivet Holes *1 3/16"* Pitch *3 1/2"*

Size of Manholes in Shell *16' x 12"*

Dimensions of Compensating Rings *7 1/2" Broad Flange 1 1/8" thick*



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Thickness of End Plates in Steam Space Approved

1 3/16

Monitors or Relief Pipes

" " " " " in Boilers

1 3/16

Pitch of Steam Space Stays

1'-6 3/4" x 1'-6"

Diam. " " " " Approved

Threads per Inch

" " " " " in Boilers

3"

6

Material of " " "

Steel

How are Stays Secured?

Nuts Inside & Outside

Diam. and Thickness of Loose Washers on End Plates

6 1/2" dia x 3/4"

" " " " Riveted " " "

Width " " " Doubling Strips " " "

9 3/4" wide x 9/16

Thickness of Middle Back End Plates Approved

27/32
27/32

~~27/32~~
~~27/32~~

" " " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at

14 1/2" x 7 1/2"

Diam. of Stays Approved

2

Threads per Inch

+6

" " " " in Boilers

2

+6

Material "

Steel

Are Stays fitted with Nuts outside?

yes.

Thickness of Back End Plates at Bottom Approved

27/32
27/32

~~27/32~~
~~27/32~~

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

1'-2 1/2" x 7 1/2"

Thickness of Doublings in " "

-

Thickness of Front End Plates at Bottom Approved

13/16
13/16

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

2

Threads per Inch

Dist. of Stays Approved

in Boilers

Material

Steel

Thickness of Front Tube Plates Approved

" " " " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

Thickness of Doublings in

Stay Tubes at

Are Stay Tubes fitted with Nuts at Front End?

Thickness of Back Tube Plates Approved

" " " " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

Thickness of Stay Tubes

" " " " "

External Diam. of Tubes

Material

Thickness of Furnace Plates Approved

" " " " " in Boilers

Smallest outside Diam. of Furnaces

Length between Tube Sheets



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Diar. of Stays Approved 2 Threads per Inch 6
 " " in Boilers 2 " 6
 Material " *Steel*

Thickness of Front Tube Plates Approved $\frac{13}{16}$ "
 " " " " in Boilers $\frac{13}{16}$ "

Pitch of Stay Tubes at Spaces between Stacks of Tubes $1'-2" \times 8\frac{3}{4}"$
 Thickness of Doublings in " " " $\frac{9}{16}$ "
 " Stay Tubes at " " " $3\frac{1}{8}" \times 5\frac{1}{16}"$
 Are Stay Tubes fitted with Nuts at Front End? *No*

Thickness of Back Tube Plates Approved $\frac{13}{16}$ "
 " " " in Boilers $\frac{13}{16}$ "

Pitch of Stay Tubes in Back Tube Plates $9" \times 8\frac{3}{4}"$
 " Plain " $4\frac{1}{2}" \times 4\frac{3}{8}"$
 Thickness of Stay Tubes $3\frac{1}{8}" \& 5\frac{1}{16}"$
 " Plain " *No. 9 B.W.G.*

External Diar. of Tubes $3\frac{1}{4}"$
 Material " *Iron*

Thickness of Furnace Plates Approved $\frac{49}{64}$ "
 " " " in Boilers $\frac{49}{64}$ "

Smallest outside Diar. of Furnaces $3'-0"$
 Length between Tube Plates $6'-11\frac{11}{32}"$

Width of Combustion Chambers (Front to Back) $2'-9"$ *On plates*
 Thickness of " " Tops Approved $\frac{3}{4}"$
 " " " " in Boilers $\frac{3}{4}"$
 Pitch of Screwed Stays in C.O. Tops $10\frac{3}{4}" \times 10"$



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Diar. of Screwed Stays Approved $1\frac{7}{8}$ Threads per Inch 10
 " " " in Boilers $1\frac{7}{8}$ " 10
 Material " " *Steel*

Thickness of Combustion Chamber Sides Approved $\frac{1}{16}$ "
 " " " " in Boilers $\frac{11}{16}$ "
 Pitch of Screwed Stays in O.C. Sides $10" \times 9"$

Diar. " " Approved $1\frac{3}{4}$ Threads per Inch 10
 " " " in Boilers $1\frac{3}{4}$ " 10
 Material " " *Steel*

Thickness of Combustion Chamber Backs Approved $\frac{23}{32}$ "
 " " " in Boilers $\frac{23}{32}$ "
 Pitch of Screwed Stays in C.O. Backs $10\frac{3}{8} \times 9\frac{1}{2}$ (Wing) $11" \times 8\frac{1}{2}$ (Centre)
 Diar. " " Approved $1\frac{3}{4}$ Threads per Inch 10
 " " " in Boilers $1\frac{3}{4}$ " 10
 Material " " *Steel*

Are all Screwed Stays fitted with Nuts inside O.O.? *Yes*

Thickness of Combustion Chamber Bottoms $\frac{11}{16}$ "

No. of Girders over each Wing Chamber 3
 " " " Centre " 2
 Depth and Thickness of Girders $8\frac{3}{4}" \times \frac{13}{16} \times 2$
 Material of Girders *Steel*
 No. of Stays in each 2 - $1\frac{7}{8}$ " Dia 10 Threads.

No. of Tubes, each Boiler 228
 Size of Lower Manholes $15" \times 11"$

VERTICAL DONKEY BOILERS

No. of Boilers
 Type
 Height
 Length of Boiler Crown above Fire Grate
 Are Boiler Crowns Flat or Dished?
 Internal Radius of Dished Boilers
 Description of Stays in Boiler Crowns
 Pitch
 Height of Firebox Crown above Fire Grate
 Are Firebox Crowns Flat or Dished?
 External Radius of Dished Crowns
 No. of Crown Stays
 Material
 Thickness of Plates
 No. of Water Tubes
 Height of Water Tubes
 Material of Water Tubes
 Size of Manhole in Shell
 Dimensions of Compressing Pipe
 Heating Surface, each Boiler
 Gross Surface
 SUPERHEATERS
 Description of Superheaters
 Where situated?
 Which boilers are superheated?
 Are superheaters of shot or wire holes and working?
 No. of Stays on Superheaters
 Are they with flange ends?
 Size of Manhole in Shell
 Pressure on Valves
 Date when Safety Valves set



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VERTICAL DONKEY BOILERS.

No. of Boilers Type 13 10
 Greatest Int. Diar. 24 24 Height 8 8
 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 Diar. Material
 External Diar. of Firebox at Top Bottom Thickness of Plates
 No. of Water Tubes Ext. Diar. 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 Diar.
 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
 Pressure, Weight or Contents
 Internal Diar.
 Thickness
 How are Flanges secured?
 Date of Hydraulic Test
 Test Pressure
 No. of Flanges
 Material
 Pressure, Weight or Contents
 Internal Diar.
 Thickness
 How are Flanges secured?
 Date of Hydraulic Test
 Test Pressure
 No. of Flanges
 Material
 Pressure, Weight or Contents
 Internal Diar.
 Thickness
 How are Flanges secured?
 Date of Hydraulic Test
 Test Pressure



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MAIN STEAM PIPES.

No. of Lengths 1
 Material S. D. Copper
 Brazed, Welded or Seamless Seamless
 Internal Diar. 3 3/4"
 Thickness 6 B.W.G.
 How are Flanges secured? Brazed.
 Date of Hydraulic Test 28/9/21.
 Test Pressure 360 lbs.

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

EVAPORATORS.

FEED WATER HEATERS

FEED WATER FILTERS



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EVAPORATORS.

No.	Type	Makers	Tons per Day
		32 Copper	
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
		360 B			

FEED WATER FILTERS.

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

LIST OF DONKEY PUMPS.

2 off. 6" x 4" x 6" Vertical Duplex Senguer's
1 Centrifugal Pump. built by Charles Holmes Hull.



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SPARE GEAR.

No. of Top End Bolts.	2	No. of Bot. End Bolts.	2	No. of Cylinder Cover Studs	-
" Coupling Bolts	6	" Main Bearing Bolts	2	" Valve Chest "	-
" Junk Ring Bolts	6	" Feed Pump Valves	1 Set	" Bilge Pump Valves	1 Set
" H.P. Piston Rings	-	" L.P. Piston Rings	-	" L.P. Piston Rings	-
" " Springs	-	" " Springs	-	" " Springs	-
" Safety Valve "	1	" Fire Bars	1/2" Set	" Feed Check Valves	1 Spare
" Piston Rods	-	" Connecting Rods	-	" Valve Spindles	-
" Air Pump Rods	-	" Air Pump Buckets	-	" Air Pump Valves	1 Set
" Cir. "	-	" Cir. "	-	" Cir. "	-
" Crank Shafts	-	" Crank Pin Bushes	-	" Crosshead Bushes	-
" Propeller Shafts	-	" Propellers	1	" Propeller Blades	-
" Boiler Tubes	7	" Condenser Tubes	6	" Condenser Ferrules	12.

OTHER ARTICLES OF SPARE GEAR:—

DATES OF VISITS

7-4-20	1-4-21	5-10-21
17-5-20	6-4-21	10-10-21
4-6-20	11-4-21	13-10-21
11-9-20	15-4-21	17-10-21
16-9-20	20-4-21	25-10-21
4-10-20	29-4-21	37-10-21
18-10-20	3-5-21	31-10-21
29-10-20	9-5-21	1-11-21
17-11-20	13-5-21	7-11-21
3-12-20	27-5-21	8-11-21
6-12-20	23-6-21	11-11-21
14-1-21	26-7-21	18-11-21
21-1-21	2-8-21	16-11-21
4-2-21	15-8-21	18-11-21
11-2-21	22-8-21	24-11-21
21-2-21	29-8-21	29-11-21
24-2-21	5-9-21	1-12-21
7-3-21	6-9-21	2-12-21
14-3-21	15-9-21	5-12-21
18-3-21	20-9-21	7-12-21
25-3-21	23-9-21	
28-3-21	28-9-21	



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

There are no auxiliary switchboards, all circuits being switched & fused on Main Board, and all Cabin and other accommodation lights having local switches

Particulars of Cases Examined	Number of Cases	Number of Wires	Number of Cables	Number of Amps	Number of Conductors	Number of Connections	Number of Isolations
-------------------------------	-----------------	-----------------	------------------	----------------	----------------------	-----------------------	----------------------

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. 7/8 S.W.G.

How are Conductors in Engine and Boiler Spaces protected?

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

What special protection is provided in the following cases?—

(1) Conductors exposed to Heat or Damp

(2) " " passing through Bunkers or Cargo Spaces

(3) " " Deck Beams or Bulkheads

Lead covered & Armoured.
Lead covered.
Lead covered & Armoured through holes at deck level in bulkheads, through heavy beams wrot iron deck fitted with pitch

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

is unimpaired? Yes

Are all Joints in accessible positions, none being made in Bunkers or Cargo Spaces? Yes No

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

What does the Resistance amount to? 1.25 megohms. Ohms.

Is the Installation supplied with a Voltmeter? Yes

" " " an Ampere Meter? Yes

Date of Trial of complete Installation

5-12-21, Duration of Trial 6 hours.



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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.

Handwritten notes and signatures in the left margin, including 'yes' and 'yep'.

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.

ELLENA

as ascertained by ^{me} from personal examination

In order LB

Thos Lawrie.
 Engineer Surveyor to the British Corporation for the
 Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

		£	s.	d.
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,

J. Green King
 Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the

11th January 1932

Fees advised

Fees paid



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Robert Fleming
 Lloyd's Register
 Foundation
 Secretary.

GENERAL CONSTRUCTION

Topic

Mr. H. H. ...

H.S. ...

...

DOCKERY HOLLERS

H.S.

Sp. A.

...

L.P.C.

Cap. A.

Response

Total

It is submitted that this Report be approved.

[Handwritten signature]

...

...

Approved by the Committee for the Class of M.B.S. ...

ELLENA

Topic

Topic



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