

No. 2015

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 1248 No. in Register Book 2475

S.S. "LADY CYNTHIA"

Makers of Engines ROSS & DUNCAN LTD

Works No. 1049-50

Makers of Main Boilers GALLOWAYS LTD

Works No. -

Makers of Donkey Boiler -

Works No. -

MACHINERY.



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014961-214973-0115

RECIPROCATING ENGINES.

Works No. 1049-50 No. of Sets Description

Triple Expansion Surface Condensing

No. of Cylinders each Engine

Three

No. of Cranks

Three

Diams of Cylinders

13 1/2 - 21 1/4 - 34

Stroke

21

Cubic feet in each L.P. Cylinder

11.04

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

yes

" " " each Receiver?

yes

Type of H.P. Valves,

Piston

" 1st L.P. "

Piston

" 2nd L.P. "

" L.P. "

Andrews & Cameron

D.P.

" Valve Gear

Stevenson Link

" Condenser

Surface Steel Built

Cooling Surface 1000 sq. ft. EACH.

Diameter of Piston Rods (plain part)

3 1/2"

Screwed part (bottom of thread)

3.18"

Material

Steel

Diar. of Connecting Rods (smallest part)

3 1/2"

Material

Steel

" Crosshead Gudgeons

4 1/2"

Length of Bearing

8"

Material

Steel

No. of Crosshead Bolts (each)

2

Diar. over Thrd.

2"

Thrds. per inch

6

Material

Steel

" Crank Pin "

2

" "

2"

" "

6

" "

" Main Bearings

6

Lengths

12" - 11" - 10 1/2"

" Bolts in each

2

Diar. over Thread

1 3/4"

Threads per inch

6

Material

Steel

" Holding Down Bolts, each Engine

78

Diar.

7/8"

No. of Metal Chocks

67

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

to a built seat.

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

-

If not, how are they fitted?

-

Connecting Rods, Forged by

DENNY & CO DUMBARTON

Piston

" " Do.

Crossheads,

SOLID WITH PISTON RODS.

Connecting Rods, Finished by

ROSS & DUNCAN.

Piston

" " Do

Crossheads,

" " Do.

Date of Harbour Trial

24 - 6 - 25.

" Trial Trip

2 - 7 - 25.

Trials run at

off Aberdeen - North Sea -

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

yes.

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

Revs. per min.

218

Pressure in 1st I.P. Receiver

140

lbs., 2nd I.P.,

35

lbs., L.P.,

6

lbs., Vacuum,

23

ins.

Speed on Trial

13.5

If the Conditions on Trial were such that full power records were not obtained give the following estimated

data:—

Builders' estimated I.H.P.

Revs. per min.

Estimated Speed

OIL HEATED TO 210° FAHRENHEIT

100 lbs PRESSURE

TAMPICO OIL. 9035G.

FAN PRESSURE 2 1/2"



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TURBINE ENGINES.

Works No. _____ Type of Turbines _____
 No. of H.P. Turbines _____ No. of I.P. _____ No. of L.P. _____ No. of Stern _____
 Are the Propeller Shafts driven direct by the Turbines or through Gearing? _____
 Is Single or Double Reduction Gear employed? _____
 Diam. of 1st Reduction Pinion _____ } Width _____ Pitch of Teeth _____
 " 1st " Wheel _____ }
 Estimated Pressure per lineal inch _____
 Diam. of 2nd Reduction Pinion _____ } Width _____ Pitch of Teeth _____
 " 2nd " Wheel _____ }
 Estimated Pressure per lineal inch _____
 Revols. per min. of H.P. Turbines at Full Power _____ S.H.P. _____
 " " I.P. " " _____
 " " L.P. " " _____
 " " 1st Reduction Shaft _____
 " " 2nd " _____
 " " Propeller Shaft _____
 Total Shaft Horse Power _____
 Date of Harbour Trial _____
 " Trial Trip _____
 Trials run at _____
 Speed on Trial _____ Knots. Propeller Revols. per min. _____ S.H.P. _____
 Turbine Spindles forged by _____
 " Wheels forged or cast by _____
 Reduction Gear Shafts forged by _____
 " " Wheels forged or cast by _____

TURBO-ELECTRIC PROPPELLING MACHINERY. DESCRIPTION OF INSTALLATION.

No. of Turbo-Generating Sets _____ Capacity of each _____
 Type of Turbines employed _____
 Description of Generators _____
 No. of Motors driving Propeller Shafts _____
 Are the Propeller Shafts driven direct by the Motors or through Gearing? _____
 Is Single or Double Reduction Gear employed? _____
 Description of Motors _____
 Diam. of 1st Reduction Pinion _____ } Width _____ Pitch of Teeth _____
 " " Wheel _____ }
 Estimated Pressure per lineal inch _____
 Diam. of 2nd Reduction Pinion _____ } Width _____ Pitch of Teeth _____
 " " Wheel _____ }
 Estimated Pressure per lineal inch _____
 Revols. per min. of Generators at Full Power _____
 " " " " _____
 " " 1st Reduction Shaft _____
 " " 2nd " _____
 " " Propeller Shaft _____
 Total Shaft Horse Power _____
 Date of Harbour Trial _____
 " Trial Trip _____
 Trials run at _____
 Speed on Trial _____ Knots. Propeller Revols. per min. _____ S.H.P. _____



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TURBO-ELECTRIC PROPELLING MACHINERY.

No. of Turbo-Generating Sets Capacity of each

Type of Turbines employed

Description of Generators

No. of Motors driving Propeller Shafting

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

Is Single or Double Reduction Gear employed?

Description of Motors

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

Estimated Pressure per lineal inch

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

Estimated Pressure per lineal inch

Revs. per min. of Generators at Full Power

- " Motors "
" " 1st Reduction Shaft
" " 2nd "
" " Propellers at Full Power

Total Shaft Horse Power

Date of Harbour Trial

" Trial Trip

Trials run at

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

Makers of Turbines

" Generators

" Motors

" Reduction Gear

Turbine Spindles forged by

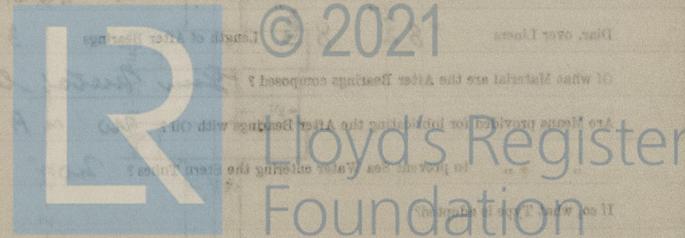
" Wheels forged or cast by

Reduction Gear Shafts forged by

" Wheels forged or cast by

DESCRIPTION OF INSTALLATION.

Handwritten notes and diagrams on page 7, including a sketch of a shaft and various technical details.



SHAFTING.

Are the Crank Shafts Built or Solid?

Solid

No. of Lengths in each

One
1924. *6.72*

Angle of Cranks

120°

Diar. by Rule

6.19

Actual

6 3/4"

In Way of Webs

—

" of Crank Pins

7 1/4

Length between Webs

12 1/4"

Greatest Width of Crank Webs

8"

Thickness

4 3/8"

Least

"

"

8"

"

4 3/8"

Diar. of Keys in Crank Webs

—

Length

—

" Dowels in Crank Pins

—

Length

Screwed or Plain

—

No. of Bolts each Coupling

6

Diar. at Mid Length

1 1/8"

Diar. of Pitch Circle

10 5/8"

Greatest Distance from Edge of Main Bearing to Crank Web

1 1/8"

Type of Thrust Blocks

Horse shoe type

No. " Rings

6

Diar. of Thrust Shafts at bottom of Collars

6 3/4"

No. of Collars

5

" " Forward Coupling

—

6 3/4"

At Aft Coupling

6 3/4"

Diar. of Intermediate Shafting by Rule

6.4"
5.38

Actual

6 1/2"

No. of Lengths

3 each

No. of Bolts, each Coupling

6

Diar. at Mid Length

1 1/8"

Diar. of Pitch Circle

10 5/8"

Diar. of Propeller Shafts by Rule

6.94"
6.25

Actual

7 1/4"

At Couplings

7 1/4"

Are Propeller Shafts fitted with Continuous Brass Liners?

*No**2 liners on each shaft.*

Diar. over Liners

8 1/2" *8 3/8"*

Length of After Bearings

3'-10"

Of what Material are the After Bearings composed?

Gun metal lined with Tinium

Are Means provided for lubricating the After Bearings with Oil?

No *in A Bracket* *Vital*

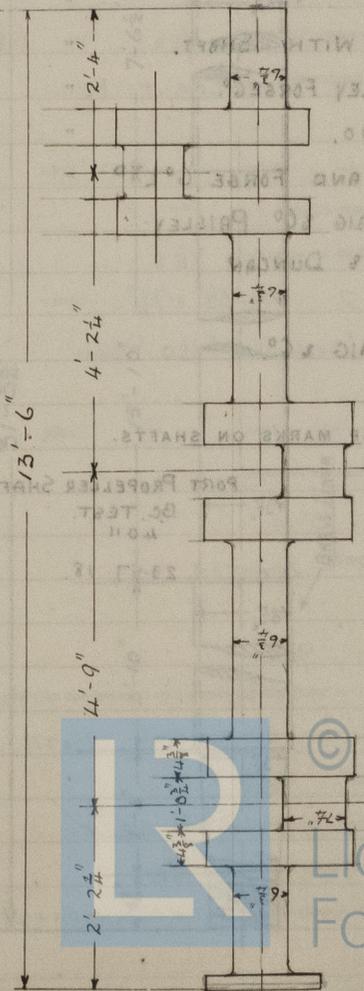
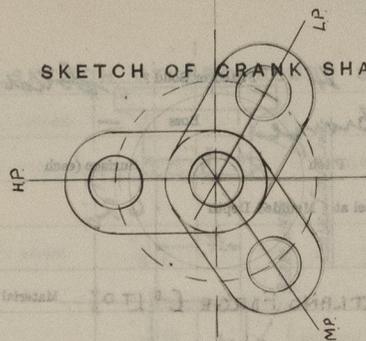
" " to prevent Sea Water entering the Stern Tubes?

—

No

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.



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No. of Blades each Propeller **4** Fitted or Solid? **Solid**
 Material of Blades **Brass** Boss **-**
 Diam. of Propellers **6'-6"** Pitch **8'-3"** Surface (each) **1/8** S. ft.
 Coefficient of Displacement of Vessel at 3/4 Moulded Depth **.62**

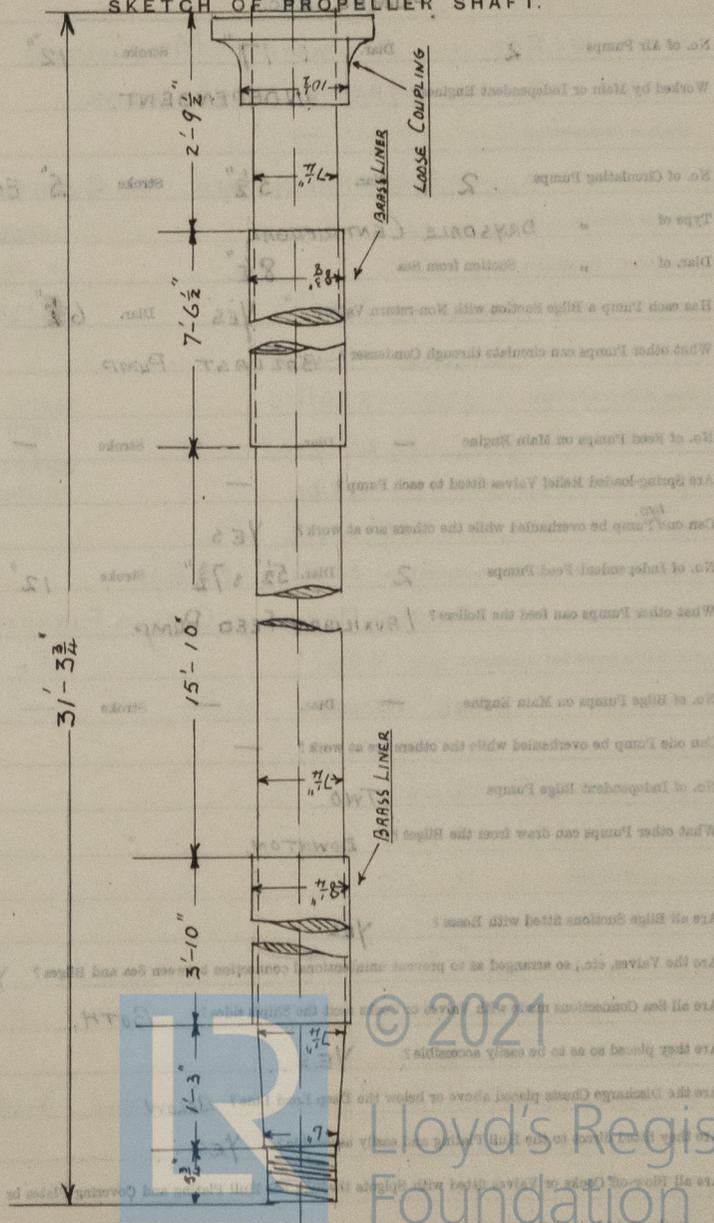
Crank Shafts Forged by **PORTLAND FORGE CO LTD** Material **STEEL**
 " Pins " }
 " Webs " } **SOLID WITH SHAFT.** " "
 Thrust Shafts " **LANGLEY FORGE CO.** " "
 Intermed. " **DO.** " "
 Propeller " **PORTLAND FORGE CO LTD** " "
 Crank " Finished by **A.F. CRAIG & CO PAISLEY.**
 Thrust " " **ROSS & DUNCAN**
 Intermed. " " " "
 Propeller " " **AF CRAIG & CO.**

STAMP MARKS ON SHAFTS.

STAR PROPELLER SHAFT.
 EX TSS "CHEAM"
 BC
 N° 5709
 O
 18-3-19.

PORT PROPELLER SHAFT
 BC. TEST.
 4011
 23.7.18.
 JOB N°
 1047.

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps 2 Diar. 17" Stroke 12"
 Worked by Main or Independent Engines? INDEPENDENT.

No. of Circulating Pumps 2 Diar. 5 1/2" Stroke 5" ENGINE
 Type of " DRYSDALE CENTRIFUGAL
 Diar. of " Suction from Sea 8 1/2"
 Has each Pump a Bilge Suction with Non-return Valve? YES Diar. 6 1/2"
 What other Pumps can circulate through Condenser? BALLAST PUMP.

No. of Feed Pumps on Main Engine — Diar. — Stroke —
 Are Spring-loaded Relief Valves fitted to each Pump? —
 Can one ^{1/2} Pump be overhauled while the others are at work? YES
 No. of Independent Feed Pumps 2 Diar. 5 1/2" & 7 3/4" Stroke 12"
 What other Pumps can feed the Boilers? AUXILIARY FEED PUMP.

No. of Bilge Pumps on Main Engine — Diar. — Stroke —
 Can one Pump be overhauled while the others are at work? —
 No. of Independent Bilge Pumps TWO.
 What other Pumps can draw from the Bilges? DOWNTON.

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? BOTH.
 Are they placed so as to be easily accessible? YES.
 Are the Discharge Chests placed above or below the Deep Load Line? BELOW
 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

Works No. 1027 GALLOWAY & MANCHESTER
 No. of Boilers 2 YARDON WATER TUBE
 Type of Boilers —
 No. of Furnaces in each —
 Type of Furnaces —
 Date when this approved —
 Approved Working Pressure —
 Hydraulic Test Pressure —
 Date of Hydraulic Test —
 " when Safety Valves set —
 Pressure at which Valves work —
 Date of Accumulation Test —
 Maximum Pressure under Accumulation Test —
 System of Drafting FORCED DRAUGHT CLOSED FURNACES
 Are Boilers in working order? YES
 Plans of Boilers SEE RECORDS

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BOILERS.

Works No. 14027. GALLOWAY LTD MANCHESTER
 No. of Boilers 2. Type YARROW WATER TUBE.
 Single or Double-ended —
 No. of Furnaces in each EXTERNALLY FIRED. OIL BURNING.
 Type of Furnaces —
 Date when Plan approved —
 Approved Working Pressure 200 lbs.
 Hydraulic Test Pressure 30.4.25
 Date of Hydraulic Test 350 lbs
 „ when Safety Valves set 25.6.25.
 Pressure at which Valves were set 200 lbs.
 Date of Accumulation Test 225.6.25.
 Maximum Pressure under Accumulation Test 225 lbs 222 lbs.
 System of Draught FORCED DRAUGHT CLOSED FURNACES.
 Can Boilers be worked separately? YES
 Makers of Plates SEE RECORDS
 „ Stay Bars „ „
 „ Rivets „ „
 „ Furnaces „ „
 Greatest Internal Diam. of Boilers Yes
 „ „ Length „ Yes
 Square Feet of Heating Surface each Boiler 3500
 „ „ Grate „ „ 60.
 No. of Safety Valves each Boiler 2 Rule Diam. Actual 3" H.L.
 Are the Safety Valves fitted with Easing Gear? YES
 No. of Pressure Gauges, each Boiler 2. No. of Water Gauges 2.
 „ Test Cocks „ „ „ Salinometer Cocks 1

Are the Water Gauges fitted direct to the Boiler Shells or mounted on Tanks? PLATES DIRECT TO DRUMS

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

Are these Pipes connected to Boilers by Cocks or Valves?

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

No. of Strakes of Shell Plating in each Boiler

FIRST TEST.

LR TEST
 FORD N^o 36.
 F.R.
 BOILER. 353 lbs
 23.12.18.

AFT. LR TEST
 N^o 41
 F.R.
 BOILER. 353 lbs
 24.12.18

SECOND TEST

BC TEST

N^o 4910.

TP 350 lbs

WP 200 lbs

R.L.G.

30.4.25.



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Are the Water Gauges fitted direct to the Boiler Shells or mounted on Pillars? **PILLARS DIRECT TO DRUMS**

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

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

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

No. of Strakes of Shell Plating in each Boiler **FIRST TEST 30 SECOND TEST 25**

Plates in each Strake **BC TEST 12 TEST**

Thickness of Shell Plates Approved **FORG W. 20 FR 32 STRIPS BOILER 22-12-18**

in Boilers **20000 TP 32000**

Are the Rivets Iron or Steel? **WP 20000**

Are the Longitudinal Seams Butt or Lap Joints? **50000**

Are the Butt Straps Single or Double? **FR 32 STRIPS BOILER 22-12-18**

Are the Double Butt Straps of equal width? **20000**

Thickness of outside Butt Straps **22-12-18**

inside **22-12-18**

Are Longitudinal Seams Hand or Machine Riveted? **Hand Riveted**

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

No. of Rivets in a Pitch **30**

Diar. of Rivet Holes Pitch

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

Are these Seams Hand or Machine riveted?

Diar. of Rivet Holes Pitch **3500**

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diar. of Rivet Holes Pitch **Yes**

Size of Manholes in Shell

Dimensions of Compensating Rings

Thickness of End Plates in Steam Space Approved

in Boilers

Pitch of Steam Space Strake

Diar. of Holes Approved

in Boilers

Material of

How are Straps Secured?

Diar. and Thickness of Loose Washers on End Plates

Divided

Doubling Straps

Thickness of Middle Back End Plates Approved

in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Straps at

Diar. of Holes Approved

in Boilers

Material

Are Straps fitted with Nuts outside?

Thickness of Back End Plates at Bottom Approved

in Boilers

Pitch of Straps at Wide Spaces between Fireboxes

Thickness of Doublings at

Thickness of Front End Plates at Bottom Approved

in Boilers

No. of Longitudinal Straps in Space between Fireboxes



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Thickness of End Plates in Steam Space Approved
 " " " " " in Boilers
 Pitch of Steam Space Stays
 Diar. " " " " Approved Threads per Inch
 " " " " " in Boilers
 Material of " " " "
 How are Stays Secured?
 Diar. and Thickness of Loose Washers on End Plates
 " " " " Riveted " " "
 Width " " " Doubling Strips " " "
 Thickness of Middle Back End Plates Approved
 " " " " " in Boilers
 Thickness of Doublings in Wide Spaces between Fireboxes
 Pitch of Stays at " " " " "
 Diar. of Stays Approved Threads per Inch
 " " " in Boilers
 Material " " " "
 Are Stays fitted with Nuts outside?
 Thickness of Back End Plates at Bottom Approved
 " " " " " in Boilers
 Pitch of Stays at Wide Spaces between Fireboxes
 Thickness of Doublings in " " "
 Thickness of Front End Plates at Bottom Approved
 " " " " " in Boilers
 No. of Longitudinal Stays in Spaces between Furnaces

Diar. of Stay Approved
 " " " in Boilers
 Material
 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
 " " " Plain " " "
 Thickness of Stay Tubes
 " " " Plain " " "
 External Diar. of Tubes
 Material
 Thickness of Furnace Plates Approved
 " " " in Boilers
 Smallest outside Diar. of Furnaces
 Length between Tube Plates
 With or without Expansion Chambers (Front to Back)
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Diar. of Stays Approved Threads per Inch

„ „ in Boilers

Material „

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

„ Plain „

Thickness of Stay Tubes

„ Plain „

External Diar. of Tubes

Material „

Thickness of Furnace Plates Approved

„ „ „ in Boilers

Smallest outside Diar. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of „ „ Tops Approved

„ „ „ in Boilers

Pitch of Screwed Stays in C.C. Tops

Diar. of Screwed Stays Approved Threads per Inch

„ „ „ in Boilers

Material „

Thickness of Combustion Chamber Tops Approved

„ „ „ in Boilers

Pitch of Screwed Stays in C.C. Tops

Diar. „ „ Approved Threads per Inch

„ „ „ in Boilers

Material „

Thickness of Combustion Chamber Backs Approved

„ „ „ in Boilers

Pitch of Screwed Stays in C.C. Backs

Diar. „ „ Approved Threads per Inch

„ „ „ in Boilers

Material „

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

Thickness of Combustion Chamber Bottoms

No. of Girders over each Fire Damper

„ „ „

Height and Thickness of Girders

Material of Girders

No. of Stays in each

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Diar. of Screwed Stays Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Sides

Diar. " " Approved Threads per Inch

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.C. Backs

Diar. " " Approved Threads per Inch

" " " 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 Tubes, each Boiler

Size of Lower Manholes

VERTICAL DONKEY BOILERS

No. of Boilers	Type
Greatest Int. Diam.	Height
Height of Boiler Crown above Fire Grate	Are Boiler Crown Flat or Dished?
External Radius of Dished Ends	Thickness of Plates
Description of Beams in Boiler Crown	Width of Overlap
Diam. of River Holes	Height of Firebox Crown above Fire Grate
Are Firebox Crown Flat or Dished?	External Radius of Dished Crown
No. of Crown Stays	Material
Internal Diam. of Firebox at Top	Thickness of Plates
No. of Water Tubes	Ext. Diam.
Material of Water Tubes	
Size of Manhole in Shell	
Description of Combustion Ring	
Heating Surface each Boiler	Grate Surface

SUPERHEATERS

Description of Superheaters	
Pressure at Inlet?	
What Boilers are connected to Superheater?	
Can superheaters be shut off while boiler are working?	
No. of Safety Valves on each superheater	
Date of Hydrostatic Test	
Last time when tested	



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VERTICAL DONKEY BOILERS.

No. of Boilers — Type —

Greatest Int. Diar. — Height —

Height of Boiler Crown above Fire Grate —

Are Boiler Crowns Flat or Dished? —

Internal Radius of Dished Ends — Thickness of Plates —

Description of Seams in Boiler Crowns —

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 Blasing Gear? —

Date of Hydraulic Test — Test Pressure —

Date when Safety Valves set — Pressure on Valves —

MAIN STEAM PIPES.

No. of Pipes —

Material —

Internal Diar. —

Thickness —

How are Pipes secured? —

Date of Hydraulic Test —

Test Pressure —

No. of Pipes —

Material —

Internal Diar. —

Thickness —

How are Pipes secured? —

Date of Hydraulic Test —

Test Pressure —



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MAIN STEAM PIPES.

No. of Lengths	9.		
Material	STEEL		
Brazed, Welded or Seamless	L.W.		
Internal Diam.	4 1/2"		
Thickness	1/4"		
How are Flanges secured?	A SCREWED & EXPANDED.		
Date of Hydraulic Test	28.8.19 & 12.9.19. WHEN NEW.		
Test Pressure	600/lbs	30.4.25.	
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

SUPERHEATERS.

No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

CONDENSERS.

No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			



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LIST OF SPARE GEAR.

No. of Top End Bolts.	No. of Bot. End Bolts.	No. of Cylinder Cover Studs.
2	2	6
" Coupling Bolts	7 PROPS	Main Bearing Bolts 2
" Junk Ring Bolts 6	Feed Pump Valves	" Bilge Pump Valves
" H.P. Piston Rings 1 set	" L.P. Piston Rings 1 set	" L.P. Piston Rings 1 set
" " Springs	" " Springs	" " Springs
" Safety Valve	" Fire Bars NONE	" Feed Check Valves 2
" Piston Rods 1	" Connecting Rods	" Valve Spindles 1 LP 1 HP.
" Air Pump Rods	" Air Pump Buckets	" Air Pump Valves
" Cir. "	" Cir. "	" Cir. "
" Crank Shafts	" Crank Pin Bushes	" Crosshead Bushes 1 pair
" Propeller Shafts 1*	" Propellers	" Propeller Blades
" Boiler Tubes	" Condenser Tubes	" Condenser Ferrules

OTHER ARTICLES OF SPARE GEAR:-

- 2 sets eye block slippers
- 1 Guide shoe.
- 6 Thrust shoes.
- 1 pair top end bushes.
- 1 set HP valve rings.
- 1 eccentric rod complete with bushes
- 1 " " only.

* This shaft has defective lining on after part of length "A" Bracket.

Bilge & Sanitary Pump.

- 1 1/2 sets piston rings
- 2 " bucket rings
- 1 " valve actuating gear
- 1 piston rod 1 bucket rod 1 face plate
- 1 set suction & delivery valves.
- 1 piston rod crank bush 1 piston rod gland bush.

Feed pump 2 sets valve actuating gear.

2 piston rods and crossheads complete. 1 steam chest complete.

Fire Bilge pump.

1 set valve actuating gear.

1 piston rod & crosshead complete.

Steering Gear

1-piston rod with top end bushes complete.

1-control valve, 1-control spindle 1-piston valve

1-piston valve spindle 2-top end bolts 2-bottom end bolts.

Windlass

1-piston. 2 sets piston rings, 2-9m. B. bushes, 1 slide valve

1 control valve 1 piston rod nut, 1 valve spindle, 1 ecc strap pulley.

Air Pumps.

1 set valve actuating gear. 1 piston rod complete.

Electric Engine

1 eccentric rod strap 1 Ring for metallic packing.

1 valve spindle 1 oil pump 1 oil strainer 1 connecting rod.

Oil Fuel Units.

2 Thermometers 1 set spanner

1 set tools

12 gauge glasses

2 suction strainers

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REFRIGERATORS.

No. of Machines

Capacity of each

Makers

Description

No. of Steam Cylinders, each Machine

No. of Compressors

No. of Cranks

Particulars of Pumps in connection with Refrigerating Plant and whether worked by Refrigerating Machines or Independently

System of Refrigeration

Insulation

Are Brine and other Regulating Valves placed so as to be accessible without entering the Insulated

Spaces?

Are all Pipes, Air Trunks, &c., well secured and protected from risk of damage?

Are all Bilge, Sounding, and Air Pipes in Insulated Spaces properly insulated?

Are Thermometer Tubes so arranged that Water cannot enter and freeze in them?

Date of Test under Working Conditions

RESULTS OF TRIALS.

COMPARTMENT.	Temp. at beginning of Trial.	Temp. at end of Trial.	Time required to obtain this Result.	Rise of Temp. after hours.
1. SHIP'S COMPARTMENT	30.0	27.0	1 1/2	0.0
2. UPPER DECK ROOM	30.0	27.0	1 1/2	0.0
3. FORWARD	30.0	27.0	1 1/2	0.0
4. MIDDLE DECK	30.0	27.0	1 1/2	0.0
5. DECK	30.0	27.0	1 1/2	0.0
6. LOWER DECK	30.0	27.0	1 1/2	0.0

Articles of Spare Gear for Refrigerating Plant carried on board:—



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Positions of Auxiliary Switch Boards, with No. of Switches on each
 (2) FORWARD END WORKING PASSAGE 3. (3) FORWARD END WORKING PASSAGE 8 (4) STARBOARD SIDE WHEEL HOUSE 8 (6) AFT END WORKING PASSAGE 8. (7) STARBOARD SIDE ENG. ROOM 5 (8) AFT END WORKING PASSAGE 8

Continous
 Double
 Position of Dynamometer Lower Platform Port & Starboard Side Eng. Rm
 Main Switch Board
 No. of Circuits to which switches are provided on this section board
 8 Circuits

Are Out-outs fitted as follows?—	Yes	No
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?	YES	
Are all Switches and Out-outs constructed of Non-inflammable Material?	YES	
Are they placed so as to be always and easily accessible?	YES	
Smallest Single Wire used, No. 1/18 S.W.G., Largest, No. 1/16 S.W.G.		
How are Conductors in Engine and Boiler Spaces protected?	RUN ON PERFORATED TRAY. LC.	
" Saloons, State Rooms, &c., " ?	LEAD COVERED RUN ON SURFACE.	
What special protection is provided in the following cases?—		
(1) Conductors exposed to Heat or Damp	RUN ON PERFORATED TRAY LC.	
(2) " " passing through Bunkers or Cargo Spaces	RUN ON GIRDER IN HOLD.	
(3) " " Deck Beams or Bulkheads	WT GLAND LEAD BUSHES.	

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? **NONE**

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? **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? **600000 Ohms.**

Is the Installation supplied with a Voltmeter? **2**

" " " an Ampere Meter? **2**

Date of Trial of complete Installation **27/6/25** Duration of Trial **6 hours each**

Have all the requirements of Section 42 been satisfactorily carried out? **2/8/25**

Robert L. Greig.



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. *None.*

Are all High Connections for Single-Wire Systems made with Bolts and Nuts, and are the Bolts and Nuts placed in the same position as those used in the original design? *Yes.*

Are the Bolts and Nuts placed in the same position as those used in the original design? *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 has the Resistance amount to? *10000 Ohms.*

Is the Installation supplied with a Voltmeter? *Yes.*

Are there any Ampere Meters? *Yes.*

Date of Trial of complete Installation? *25/11/22*

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

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. "LADY CYNTHIA" as ascertained by me from personal examination.

What special provisions are provided in the following cases?

(1) Connections exposed to heat or flame.

(2) Connections through Deckways.

(3) Connections in the vicinity of the Main Mast.

(4) Connections in the vicinity of the Main Mast.

(5) Connections in the vicinity of the Main Mast.

(6) Connections in the vicinity of the Main Mast.

(7) Connections in the vicinity of the Main Mast.

(8) Connections in the vicinity of the Main Mast.

(9) Connections in the vicinity of the Main Mast.

(10) Connections in the vicinity of the Main Mast.

(11) Connections in the vicinity of the Main Mast.

(12) Connections in the vicinity of the Main Mast.

Robert H. Greig
Engineer Surveyor to the British Corporation for the Survey and Registry of Shipping.

Fees—		£	s.
MAIN BOILERS.			
H.S.	Sq. ft.	:	:
G.S.	"	:	:
DONKEY BOILERS.			
H.S.	Sq. ft.	:	:
G.S.	"	:	:
ENGINES.			
L.P.O.	Cub. ft.	:	:
Testing, &c.			
Expenses			
Total	£	:	:

£ 80.
Charged for Reason's Instruction
See Hull Book

It is submitted that this Report be approved,

Robert H. Greig
Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the *12th Aug. 1928.*

Fees advised
Fees paid



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Clifford M. ...
Secretary.
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