

No. 1793

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1665* No. in Register Book *2925*

S.S. *ALBERT C. FIELD.*

Makers of Engines *MESSRS MACCOLL & POLLOCK LTD.*

Works No. *326.*

Makers of Main Boilers *MESSRS MACCOLL & POLLOCK LTD.*

Works No. *326.*

Makers of Donkey Boiler *—*

Works No. *—*

MACHINERY



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1793-0002

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. *1665* No. in Register Book *2925*

Received at Head Office *24/8/23*

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Triple~~ ~~Coin Quadruple~~ Screw Steamer

"*Albert C Field*"

Official No. Port of Registry *Middlebrough.*

Registered Owners *The Eastern Steamship Co Ltd.*
(A. B. Mackay, Mgr)

Engines Built by *Messrs Mac Coll & Pollock Ltd.*

at *Sunderland*

Main Boilers Built by *Messrs Mac Coll & Pollock Ltd.*

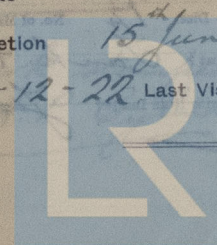
at *Sunderland.*

Donkey " "

at

Date of Completion *15 June 1923*

First Visit *1-12-22* Last Visit *15-6-23* Total Visits *64.*



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RECIPROCATING ENGINES.

Works No. 326 No. of Sets One Description Triple Expansion
Surface Condensing.

No. of Cylinders each Engine Three No. of Cranks Three
Diars. of Cylinders 16"-27"-44" Stroke 33"
Cubic feet in each L.P. Cylinder 29

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

" " each Receiver?

Type of H.P. Valves, Piston Valve (Inside Admission)

" 1st I.P., Trich Valve "D" Type.

" 2nd I.P.,

" L.P.,

" Valve Gear

" Condenser

Ordinary "D" Valve.
Stephenson's Link Gear.

Circular four flow Cooling Surface 782. sq. ft.

Diameter of Piston Rods (plain part) 4 1/4" Screwed part (bottom of thread) 3.036"

Material " Ingot Steel.

Diar. of Connecting Rods (smallest part) 4 1/4" Material Scrap Iron

" Crosshead Gudgeons 4 1/8" Length of Bearing 4" Material Scrap Iron

No. of Crosshead Bolts (each) 4 Diar. over Thrd. 1 7/8" Threds. per inch 6 Material Steel

" Crank Pin " 2 " 2 1/2" " 6 " "

" Main Bearings 6 Lengths 8 3/8" x 8 3/4" dia

" Bolts in each 2 Diar. over Thread 2 1/4" Threds per inch 6 Material Steel

" Holding Down Bolts, each Engine 39 Diar. 1 1/4" No. of Metal Chocks 39.

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

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

If not, how are they fitted?

Yes.

Connecting Rods, Forged by Reay & Mather Ltd Hyllton.

Piston " " J. Spencer & Sons, Newburn

Crossheads, " " Reay & Mather Ltd.

Connecting Rods, Finished by Mac Coll & Pollock Ltd.

Piston " " "

Crossheads, " " "

Date of Harbour Trial 13th June 1923.

" Trial Trip 15th June 1923.

Trials run at Whitley

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

If so, what was the I.H.P.? 921 Revols. per min. 113.5.

Pressure in 1st I.P. Receiver, 62 lbs., 2nd I.P., — lbs., L.P., 14 lbs., Vacuum, 24 1/2" ins.

Speed on Trial 7.27.

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

data:—

Builders' estimated I.H.P.

Revol. per min.

Estimated Speed

B.C.
2019.
270 LBS
B.H.
17-4-23.

Test mark stamped
on H.P. Cylinders.

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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

Revs. 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 Revs. 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 MACHINERY. DESCRIPTION OF INSTALLATION.

No. of Turbo-Generating Sets

Type of Turbines employed

Description of Generator

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

" 1st " Wheel

Description of Turbine per lineal inch

Diam. of 2nd Reduction Pinion

" 2nd " Wheel

Estimated Pressure per lineal inch

Revs. per min. of Generators at Full Power

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "

" " " " " "



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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

" 1st " Wheel

Width

Pitch of Teeth

Estimated Pressure per lineal inch

Diam. of 2nd Reduction Pinion

" 2nd " Wheel

Width

Pitch of Teeth

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.

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SHAFTING.

Are the Crank Shafts Built or Solid?

Built

No. of Lengths in each

In one length

Angle of Cranks

120°

Diar. by Rule

8.59"

Actual

8 $\frac{3}{4}$ "

In Way of Webs

8 $\frac{7}{8}$ "

" of Crank Pins

8 $\frac{3}{4}$ "

Length between Webs

8 $\frac{3}{4}$ "

Greatest Width of Crank Webs

16 $\frac{1}{4}$ "

Thickness

5 $\frac{1}{2}$ "

Least " "

12 $\frac{1}{2}$ "

"

5 $\frac{1}{2}$ "

Diar. of Keys in Crank Webs

1 $\frac{1}{4}$ "

Length

4"

" Dowels in Crank Pins

 *$\frac{7}{8}$ "*Length *3 $\frac{1}{2}$ "*

Screwed or Plain

Screwed

No. of Bolts each Coupling

6

Diar. at Mid Length

2"

Diar. of Pitch Circle

12 $\frac{1}{4}$ "

Greatest Distance from Edge of Main Bearing to Crank Web

 $\frac{1}{4}$ "

Type of Thrust Blocks

Horse Shoe Type.

No. " Rings

4

Diar. of Thrust Shafts at bottom of Collars

8 $\frac{3}{4}$ "

No. of Collars

4

" " Forward Coupling

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

At Aft Coupling

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

Diar. of Intermediate Shafting by Rule

Actual

No. of Lengths

No. of Bolts, each Coupling

Diar. at Mid Length

Diar. of Pitch Circle

Diar. of Propeller Shafts by Rule

9.8"

Actual

10"

At Couplings

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

Are Propeller Shafts fitted with Continuous Brass Liners?

Yes.

Diar. over Liners

11"

Length of After Bearings

3'-4"

Of what Material are the After Bearings composed?

Lignum Vital

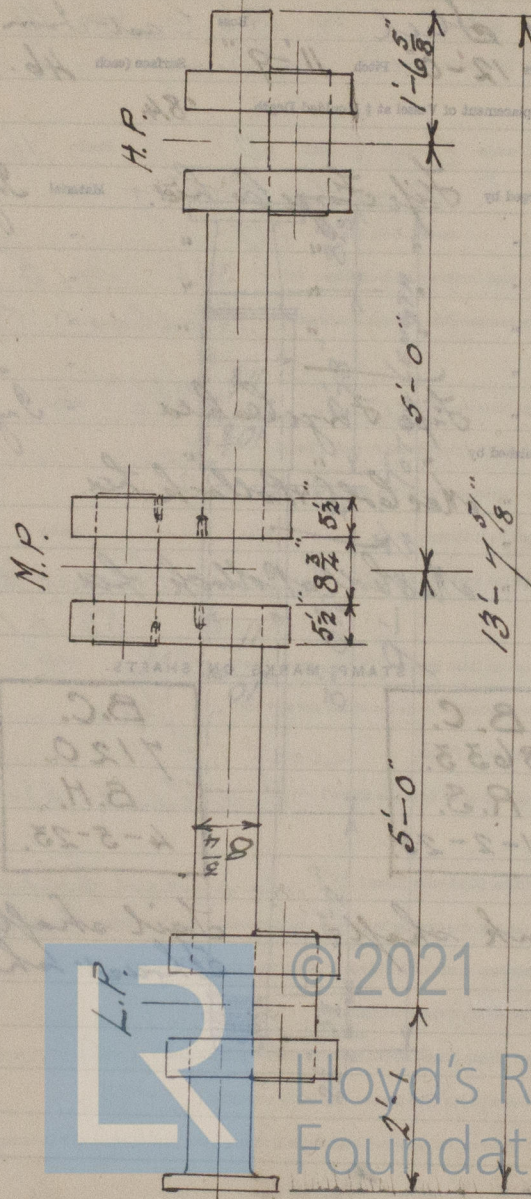
Are Means provided for lubricating the After Bearings with Oil?

No

" " to prevent Sea Water entering the Stern Tubes?

If so, what Type is adopted?

SKETCH OF CRANK SHAFT.



No. of Blades each Propeller *4* Fitted or Solid? *Fitted*
 Material of Blades *Steel* Boss *Cast Iron*
 Diam. of Propellers *12'-0"* Pitch *11'-9"* Surface (each) *46.* S. ft.
 Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth *84*

Crank Shafts Forged by *Life Forge Co. Ltd.* Material *Ingot Steel*
 " Pins " " " " " "
 " Webs " " " " " " "
 Thrust Shafts " " " " " " "
 Intermed. " " " " " " "
 Propeller " " *Life Forge Co. Ltd.* " *Ingot Steel*
 Crank " Finished by " "
 Thrust " " *MacCall & Pollock Ltd.*
 Intermed. " " "
 Propeller " " *MacCall & Pollock Ltd.*

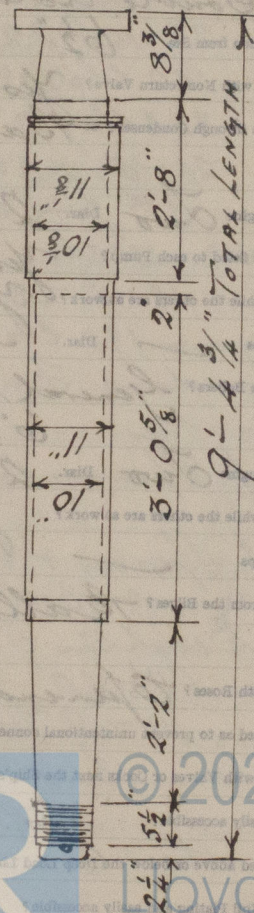
STAMP MARKS ON SHAFTS.

B.C.
 8633.
 R.S.
 21-2-23.

B.C.
 7120.
 B.H.
 4-5-23.

Crank shaft: Tail shaft: &
 Thrust shaft:

SKETCH OF PROPELLER SHAFT.



PUMPS, ETC.

No. of Air Pumps *One* Diar. *14½"* Stroke *16"*

Worked by Main or Independent Engines? *Main*

No. of Circulating Pumps *One* Diar. *10"* Stroke *16"*

Type of *" Double Acting*

Diar. of *" Suction from Sea 6½"*

Has each Pump a Bilge Suction with Non-return Valve? *Yes* Diar. *5"*

What other Pumps can circulate through Condenser? *Ballast Pump*

No. of Feed Pumps on Main Engine *Two* Diar. *2¾"* Stroke *16"*

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? *General Service Donkey*

No. of Bilge Pumps on Main Engine *Two* Diar. *2¾"* Stroke *16"*

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? *Ballast Donkey*

Are all Bilge Suctions fitted with Roses? *Open ended pipes with 13 holes*

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?

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



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BOILERS.

Works No. *326*

No. of Boilers *Two* Type *Cylindrical Multitubular*

Single or Double-ended *Single*

No. of Furnaces in each *Two*

Type of Furnaces *Beighton's Corrugation Withdrawable*

Date when Plan approved *23-12-22.*

Approved Working Pressure *180 lbs/10"*

Hydraulic Test Pressure *320 lbs/10"*

Date of Hydraulic Test *28-5-23.*

" when Safety Valves set *13th June 1923.*

Pressure at which Valves were set *180 lbs.*

Date of Accumulation Test *18-5-23.*

Maximum Pressure under Accumulation Test *190 lbs.*

System of Draught *Howdells Forced Draught (C.A.)*

Can Boilers be worked separately? *Yes.*

Makers of Plates *J. Spencer & Sons Newburn*

" Stay Bars *J. Spencer & Sons*

" Rivets *Ring-Bolt & Nut Co.*

" Furnaces *Beighton Tube Co.*

Greatest Internal Diam. of Boilers *11'-10"*

" " Length " *10'-9²⁵/₃₂"*

Square Feet of Heating Surface each Boiler *1346.3*

" " Grate " " *38.09*

No. of Safety Valves each Boiler *1 Pair* Rule Diam. *2-56* Actual *2³/₄"*

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

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

" Test Cocks " *Three* " Salinometer Cocks *One*

B.C. TEST.
3095.
320 LBS.
W.P. 180 "
B.H.
28-5-23.

Mark stamped on 2 Main Boilers



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

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

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

Plates in each Strake *One*

Thickness of Shell Plates Approved *1"*

in Boilers *1"*

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 *7/8"*

inside *1"*

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

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

No. of Rivets in a Pitch *5*

Diam. of Rivet Holes *1 7/16"* Pitch *7.58"*

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

Are these Seams Hand or Machine Riveted? *—*

Diam. of Rivet Holes *—* Pitch *—*

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

Are these Seams Hand or Machine riveted? *Hand*

Diam. of Rivet Holes *1 7/8"* Pitch *3 3/4"*

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

Are these Seams Hand or Machine Riveted? *Machine*

Diam. of Rivet Holes *1 7/8"* Pitch *3 3/4"*

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

Dimensions of Compensating Rings *2'-5" x 2'-3"*

Thickness of End Plates in Steam Space Approved

in Boilers

Pitch of Steam Space Straps

Approved

in Boilers

Material of

How are Straps Secured?

Use and Thickness of Loose Washers on End Plates

Rivets

Double Straps

Width

Thickness of Middle Back End Plates Approved

in Boilers

Thickness of Doubling in Wide Spaces between Endplates

Pitch of Straps at

Diam. of Straps 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 Endplates

Thickness of Doubling in

Thickness of Front End Plates at Bottom Approved

in Boilers

Thickness of Doubling at Bottom

No. of Rows of Rivets in Centre Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes

Pitch



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Thickness of End Plates in Steam Space Approved

 $1\frac{7}{8}$ "

" " " " " in Boilers

 $1\frac{7}{8}$ "

Pitch of Steam Space Stays

 $1'-6" \times 1'-8" \text{ Horiz} \times 1'-2\frac{3}{4}" \text{ Vert}$

Diar. " " " " Approved

 $6-2\frac{3}{4}"$ Threads per Inch

6.

" " " " " in Boilers

 $4-2\frac{3}{8}"$ 6.

Material of " " "

Steel Bar

How are Stays Secured?

Nuts (Outside & Inside)

Diar. and Thickness of Loose Washers on End Plates

Ordinary washers.

" " " " Riveted " " "

Width " " Doubling Strips

Thickness of Middle Back End Plates Approved

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

" " " " " in Boilers

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

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at

 $6\frac{3}{8}" \text{ Horiz} \times 8\frac{3}{8}" \text{ Vert}$

Diar. of Stays Approved

 $1\frac{3}{4}" (1-2)"$ Threads per Inch

9

" " " " in Boilers

 $1\frac{3}{4}" (1-2)"$ 9.

Material "

Steel

Are Stays fitted with Nuts outside?

Nuts (Outside & Inside)

Thickness of Back End Plates at Bottom Approved

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

" " " " " in Boilers

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

Pitch of Stays at Wide Spaces between Fireboxes

 $12\frac{3}{4}" \times 8\frac{3}{8}"$

Thickness of Doublings in

 $1\frac{3}{16}"$ Thickness of Doubling at Bottom Back = $\frac{7}{16}"$

Thickness of Front End Plates at Bottom Approved

 $2\frac{7}{32}"$

" " " " " in Boilers

 $2\frac{7}{32}"$

No. of Longitudinal Stays in Spaces between Furnaces

One



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Diar. of Stays Approved $2\frac{3}{4}"$ Threads per Inch 6
 " " in Boilers $2\frac{3}{4}"$
 Material *Steel*
 Thickness of Front Tube Plates Approved $27/32"$
 " " " in Boilers $27/32"$
 Pitch of Stay Tubes at Spaces between Stacks of Tubes $8\frac{3}{4}"$ Vert $\times 13\frac{1}{2}"$ Horiz
 Thickness of Doublings in " " "
 " Stay Tubes at " " " $5/16"$
 Are Stay Tubes fitted with Nuts at Front End? *Yes.*
 Thickness of Back Tube Plates Approved $5/16"$
 " " " in Boilers $5/16"$
 Pitch of Stay Tubes in Back Tube Plates $8\frac{3}{4}" \times 9"$
 " Plain " $4\frac{3}{8}" \times 4\frac{1}{2}"$
 Thickness of Stay Tubes $7/16"$ (Top Row $3/8"$)
 " Plain " 8 WG
 External Diar. of Tubes $3\frac{1}{4}"$
 Material *Lapwelded - iron.*
 Thickness of Furnace Plates Approved $17/32"$
 " " " in Boilers $17/32"$
 Smallest outside Diar. of Furnaces $3'-4\frac{1}{16}"$
 Length between Tube Plates $7'-2"$
 Width of Combustion Chambers (Front to Back) $2'-9\frac{3}{32}"$
 Thickness of " " Tops Approved $23/32"$
 " " " in Boilers $23/32"$
 Pitch of Screwed Stays in C.C. Tops $9\frac{7}{8}" \times 10\frac{1}{8}"$



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Diar. of Screwed Stays Approved

 $1\frac{3}{4}$ "

Threads per Inch

9

" " " in Boilers

 $1\frac{3}{4}$ "

Material " "

Steel Bar.

Thickness of Combustion Chamber Sides Approved

 $\frac{1}{16}$ "

" " " " in Boilers

 $\frac{1}{16}$ "

Pitch of Screwed Stays in C.O. Sides

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

Diar. " " Approved

 $1\frac{3}{4}$ "

Threads per Inch

9

" " " in Boilers

do

do.

Material " "

Steel.

Thickness of Combustion Chamber Backs Approved

 $\frac{43}{64}$ "

" " " " in Boilers

 $\frac{43}{64}$ "

Pitch of Screwed Stays in C.O. Backs

 $10" \times 8\frac{3}{8}"$

Diar. " " Approved

 $1\frac{7}{8} \& 1\frac{3}{4}"$

Threads per Inch

9

" " " in Boilers

do

do.

Material " "

Steel.

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

Yes.

Thickness of Combustion Chamber Bottoms

 $\frac{15}{16}$ "

No. of Girders over each Wing Chamber

4.

" " " Centre "

—

Depth and Thickness of Girders

 $2\frac{7}{8}" \text{ Plates } \times 7\frac{7}{8}" \text{ Deep.}$

Material of Girders

Steel

No. of Stays in each

Two.

No. of Tubes, each Boiler

178.

Size of Lower Manholes

 $16" \times 12"$

VERTICAL DONKEY BOILERS.

No. of Boilers
Type
Greatest Int. Diar.
Height of Boiler Crown above Fire Grate
Are Boiler Crowns Flat or Dished?
Internal Radius of Dished Boilers
Description of Beams in Boiler Crowns
Diar. of Fire Bricks
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
Horizontal Diar. of Firebox at Top
No. of Water Tubes
Material of Water Tubes
Diar. of Manhole in Shell
Dimensions of Connecting Flange
Hanging Outlets, each Boiler
No. of Tubes

SUPERHEATERS.



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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 Easing Gear?

Date of Hydraulic Test

Test Pressure

Date when Safety Valves set

Pressure on Valves

MAIN STEAM PIPES



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MAIN STEAM PIPES.

No. of Lengths	One		
Material	S.D. Copper		
Brazed, Welded or Seamless	Seamless		
Internal Diam.	3 3/4"		
Thickness	7.5 W.G.		
How are Flanges secured?	Brazed.		
Date of Hydraulic Test	6-6-23.		
Test Pressure	400 lbs.		
No. of Lengths	One		
Material	S.D. Copper		
Brazed, Welded or Seamless	Seamless		
Internal Diam.	3 3/4"		
Thickness	7.5 W.G.		
How are Flanges secured?	Brazed.		
Date of Hydraulic Test	6-6-23.		
Test Pressure	400 lbs.		
No. of Lengths			
Material			
Brazed, Welded or Seamless			
Internal Diam.			
Thickness			
How are Flanges secured?			
Date of Hydraulic Test			
Test Pressure			

LIST OF ROTARY PUMPS

FEED WATER HEATERS.

FEED WATER FILTERS.



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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		

None fitted

FEED WATER HEATERS.

No.	Type
Makers	
Working Pressure	Test Pressure
Date of Test	

FEED WATER FILTERS.

No.	Type	Size
Makers	<i>Gravitation</i>	
Working Pressure	Test Pressure	Date of Test
	<i>20 lbs.</i>	<i>30-4-23.</i>

LIST OF DONKEY PUMPS.

Feed Donkey 6" x 8 1/2" x 18" G.F. Blair & Co.
Ballast 11 1/2" x 9" x 11" x 10" The Larnont.



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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.

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

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ELECTRIC LIGHTING.

ELECTRIC LIGHTING.

Installation Fitted by *The Curriers Shipbuilding Co Ltd*
 No. and Description of Dynamos *One 42 H.P. Compound Wound.*
 Makers of Dynamos *Messrs The Stand Forge & Eng Co Ltd*
 Capacity " *45* Amperes, at *100* Volts, *400* Revs. per Min.
 Current Alternating or Continuous *Continuous*
 Single or Double Wire System *Double Wire Insulated System*
 Position of Dynamos *Aft end of E.R. Starboard Side.*
 " Main Switch Board *do.*
 No. of Circuits to which Switches are provided on Main Switch Board *Three Lighting Circuits*
 Particulars of these Circuits:—

Circuit.	Number of Lights.	Candle Power.	Current Required. Amps.	Size of Conductor.	Current Density.	Conductivity of Conductor.	Insulation Resistance per Mile.
1) Engineers & Crew	18 2 3	16 32 120	15	7/1036	Approx 2000 Amps per sq	100%	600 Meg
2) Navigation & Fore & Aft	5 3 14	32 8 16	16	7/1036	Approx 700 Amps per sq	100%	600 Meg
3) Engine Room	12 3	16 200	10.2	7/1036	Approx 1400 Amps per sq	100%	600 Meg

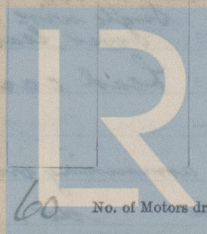
Total No. of Lights

60

No. of Motors driving Fans, &c.

No. of Heaters

Current required for Motors and Heaters



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Fuse

Positions of Auxiliary Switch Boards, with No. of Switches on each "A" Engine Room entrance
 "B" Engineers "C" Crew space forward.

Are Out-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 Out-outs constructed of Non-inflammable Material?

Are they placed so as to be always and easily accessible?

Smallest Single Wire used, No. 3/029 S.W.G., Largest, No. 7/064 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

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

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

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

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

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

Has the Insulation Resistance over the whole system been tested?

What does the Resistance amount to?

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter?

Date of Trial of complete Installation

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

15th June 23 Duration of Trial 4 hrs.



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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, or, in consequence of the fact that the Committee has sanctioned the Plans, and the Chief

Fees—

MAIN BOILERS.

H.S. *2692.6* Sq. ft. *20 : 0 : 0*

G.S. *76.18* " : :

DONKEY BOILERS.

H.S. Sq. ft. : :

G.S. " : :

£ : :

ENGINES.

L.P.C. *29* Cub. ft. *24 : 10 : 0*

£ : :

Testing, &c. ... : :

£ : :

Expenses ... : :

Total ... £ *44 : 10 : 0*

It is submitted that this Report be approved.

J. J. Adams
Chief Surveyor.

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

5th Sept 1923

Fees advised

Fees paid



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Secretary.

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. *Albert C. Field*

as ascertained by me from personal examination

Bryan Hodgson

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

REPORT OF THE GENERAL CONSTRUCTION

Have the following been approved by the Committee for the Class of M.B.S. or the

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