

No. 2290

TRANSFERRED TO:
L R. SYSTEM

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. 2321 No. in Register Book 3717

" " TRANSFERRED TO:
L R. SYSTEM
S.S. O K U

Makers of Engines Smiths Dock Co Ltd.

Works No. 347.

Makers of Main Boilers Blair Co (1926) Ltd.

Works No. C. 247.

Makers of Donkey Boiler ✓

Works No. ✓

MACHINERY.

TRANSFERRED TO:
L R. SYSTEM

012193 - 012202 - 0175

No.

THE BRITISH CORPORATION FOR THE SURVEY
AND
REGISTRY OF SHIPPING.

Report No. No. in Register Book

Received at Head Office

15th February 1930

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the ~~Single Triple~~ Twin Quadruple Screw Trawler.

"10 Ru"

Official No.

Port of Registry

Cardiff.

Registered Owners

Heale Street.

Engines Built by

Cumtch & Co. Ltd.
Cath Bank-on-Las.
Blair & Co. (1926) Ltd.
Stockton-on-Las.

at

Main Boilers Built by

at

Donkey

at

Date of Completion

10-29

First Visit

12-8-29

Last Visit

19-10-29

Total Visits

30

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RECIPROCATING ENGINES

Works No. **347** No. of Sets **1** Description **Triple expansion. S.C. Berks.**

No. of Cylinders each Engine **3** No. of Cranks **3**
 Diars. of Cylinders **13 1/4" - 23" - 34"** Stroke **24"**
 Cubic feet in each L.P. Cylinder **16.8**

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

" each Receiver?

Type of H.P. Valves,

1st I.P., "

2nd I.P., "

L.P., "

" Valve Gear

" Condenser

Diameter of Piston Rods (plain part)

Material

Diar. of Connecting Rods (smallest part)

" Crosshead Gudgeons

No. of Crosshead Bolts (each)

" Crank Pin "

" Main Bearings

" Bolts in each

" Holding Down Bolts, each Engine

Are the Engines bolted to the Tank Top or 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

Piston

Crossheads,

Connecting Rods, Finished by

Piston

Crossheads,

Date of Harbour Trial

" Trial Trip

Trials run at

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

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

Pressure in 1st I.P. Receiver,

Speed on Trial

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

data:—

Builders' estimated L.H.P.

Estimated Speed

Connecting Rods, Forged by **Brown Bros.**

Piston

Crossheads,

Connecting Rods, Finished by **Cumtch Oke Ltd.**

Piston

Crossheads,

Date of Harbour Trial **14-10-29.**

" Trial Trip **19-10-29.**

Trials run at **In North Sea.**

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

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

Pressure in 1st I.P. Receiver, **60** lbs., 2nd I.P., **10** lbs., Vacuum, **25** ins.

Speed on Trial **no chas taken.**

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

data:—

Builders' estimated L.H.P. **550**

Estimated Speed **10.5 knots.**



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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.

Type of Turbine Hooks
 „ „ Hinges

Diam. of Turbine Shafts at bottom of Collars
 „ „ Forward Coupling

Diam. of Intermediate Shafting by Hole
 „ „ Disc at Mid Length

Diam. of Propeller Shafts by Hole
 „ „ At Couplings

At what intervals are the After Bearings composed?
 „ „ Are the After Bearings provided for lubrication the After Bearings with Oil?

Is the After Bearings provided for lubrication the After Bearings with Oil?



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SHAFTING.

Are the Crank Shafts Built or Solid?

built.

No. of Lengths in each

one.

Diar. by Rule

Actual

Angle of Cranks

120°

In Way of Webs

7 3/8"

No. of Crank Pins

7 3/8"

Length between Webs

8 5/8"

Greatest Width of Crank Webs

14 1/2"

Thickness

4 5/8"

Least

" "

11 1/4"

"

3 7/8"

Diar. of Keys in Crank Webs

1 1/4"

Length

3 7/8"

No. of Dowels in Crank Pins

1"

Length

3 1/2"

Screwed or Plain

plain

No. of Bolts each Coupling

4

Diar. at Mid Length

2 1/8"

Diar. of Pitch Circle

11 3/4"

Greatest Distance from Edge of Main Bearing to Crank Web

1/8"

Type of Thrust Blocks

Horseshoe.

No. " Rings

4

Diar. of Thrust Shafts at bottom of Collars

7 3/8"

No. of Collars

4

" " Forward Coupling

7"

At Aft Coupling

4

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

Actual

8"

At Couplings

7"

Are Propeller Shafts fitted with Continuous Brass Liners?

yes.

Diar. over Liners

9"

Length of After Bearings

3'-0 1/2"

Of what Material are the After Bearings composed?

Wigum Vitā.

Are Means provided for lubricating the After Bearings with Oil?

no

" " to prevent Sea Water entering the Stern Tubes?

no.

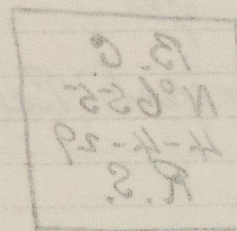
If so, what Type is adopted?

✓

SKETCH OF CRANK SHAFT.

Sketch of Crank Shaft showing details of the crank web, pin, and connecting rod. The drawing includes dimensions for the crank pin diameter, web thickness, and the distance between the main and intermediate bearings. The text is handwritten and includes the following information:

- Material of Crank: *Wigum Vitā.*
- Material of Pin: *Wigum Vitā.*
- Material of Connecting Rod: *Wigum Vitā.*
- Dimensions: *120°*, *7 3/8"*, *8 5/8"*, *14 1/2"*, *11 1/4"*, *3 7/8"*, *1 1/4"*, *3 1/2"*, *2 1/8"*, *11 3/4"*, *1/8"*.



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PUMPS, ETC.

No. of Air Pumps

1

Diar.

4"

Stroke

13½"

Worked by Main or Independent Engines?

Main Engines.

No. of Circulating Pumps

Centrifugal

Diar.

Stroke

Type of

"

Diar. of

Suction from Sea

5½"

Has each Pump a Bilge Suction with Non-return Valve?

Yes.

Diar.

4"

What other Pumps can circulate through Condenser?

Ballast Doukey.

No. of Feed Pumps on Main Engine

2

Diar.

2¾"

Stroke

13½"

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

1

Diar.

4¼"

Stroke

6"

What other Pumps can feed the Boilers?

Ballast Doukey.

No. of Bilge Pumps on Main Engine

2

Diar.

2¾"

Stroke

13½"

Can one Pump be overhauled while the others are at work?

Yes.

No. of Independent Bilge Pumps

1

What other Pumps can draw from the Bilges?

Bilge ejector, Ballast Doukey.

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?

Aboard.

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.

Type

Single or Double-ended

No. of Furnaces in each

Type of Furnaces

Date when Plan approved

Approved Working Pressure

Hydraulic Test Pressure

Date of Hydraulic Test

When Safety Valves set

Pressure at which Valves were set

Date of Accumulation Test

Maximum Pressure under Accumulation Test

System of Drafting

Can Boilers be worked separately?

Makers of Plates

Day Date

Initials

Signature

Greatest Internal Diameter of Boilers

Length

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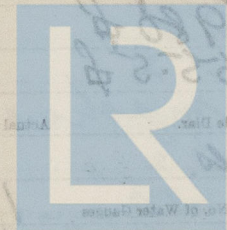
Square Feet of Heating Surface

No. of Safety Valves on each Boiler

No. of Blow-off Valves fitted with lifting gear

No. of Water Connections

Test Cocks



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BOILERS

Works No.

No. of Boilers

Single or Double-ended

No. of Furnaces in each

Type of Furnaces

Date when Plan approved

Approved Working Pressure

Hydraulic Test Pressure

Date of Hydraulic Test

" when Safety Valves set

Pressure at which Valves were set

Date of Accumulation Test

Maximum Pressure under Accumulation Test

System of Draught

Can Boilers be worked separately?

Makers of Plates

" Stay Bars

" Rivets

" Furnaces

Greatest Internal Diar. of Boilers

" " Length "

Square Feet of Heating Surface each Boiler

" " Grate " "

No. of Safety Valves each Boiler

Are the Safety Valves fitted with Easing Gear?

No. of Pressure Gauges, each Boiler

" Test Cocks

Rule Diar.

Actual

No. of Water Gauges

" Salinometer Cocks

G 24⁷/₈
 Cylindrical multitubular
 single

3
 plain

180 lbs.

320 "

5-8-29.

14-10-29.

186 lbs.

14-10-29.

186 lbs.

natural

yes.
 J. Boulton & Co. Ltd.

St. Charles & Co.

Blair & Co. Ltd.

Beardmore & Co.

14'-0"

10'-9"

1980 sq

55.5 sq

2

2 3/4"

yes.

2

3

1

1



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

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

Are these Pipes connected to Boilers by Cocks or Valves?

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

No. of Strakes of Shell Plating in each Boiler

Plates in each Strake

Thickness of Shell Plates Approved

" " in Boilers

Are the Rivets Iron or Steel?

Are the Longitudinal Seams Butt or Lap Joints?

Are the Butt Straps Single or Double?

Are the Double Butt Straps of equal width?

Thickness of outside Butt Straps

" inside "

Are Longitudinal Seams Hand or Machine Riveted?

Are they Single, Double, or Treble Riveted?

No. of Rivets in a Pitch

Diam. of Rivet Holes $1\frac{3}{16}$ " Pitch

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

Are these Seams Hand or Machine riveted?

Diam. of Rivet Holes $1\frac{3}{16}$ " Pitch

No. of Rows of Rivets in Back End Circumferential Seams

Are these Seams Hand or Machine Riveted?

Diam. of Rivet Holes $1\frac{3}{16}$ " Pitch

Size of Manholes in Shell

Dimensions of Compensating Rings

values.

one.

2

$\frac{1}{8}$ "

$\frac{1}{8}$ "

steel.

butt.

double.

yes.

$\frac{1}{8}$ "

1"

machine.

treble.

5

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

1

1

2

hand

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

2

machine.

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

16×12 "

$2-7 \times 2-3 \times 1\frac{1}{8}$ "

Thickness of End Plates in Steam Space Approved

" " in Boilers

Pitch of Steam Space Straps

Diam. of Rivets Approved

" " in Boilers

Material of

How are Straps Secured?

Diam. and Thickness of Loose Washers on End Plates

" Riveted

" Doubling Straps

Thickness of Middle Back End Plates Approved

" " in Boilers

Thickness of Doublers in Wide Spaces between Fireboxes

" " in Boilers

Pitch of Straps Approved

" " in Boilers

Material of

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 Doublers

Thickness of Front End Plates at Bottom Approved

" " in Boilers

No. of Circumferential Straps in Spaces between Fireboxes



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Thickness of End Plates in Steam Space Approved

1 7/64"

" " " " " in Boilers

1 7/64"

Pitch of Steam Space Stays

15 1/2" x 18"

Diar. " " " " Approved

2 7/8"

Threads per Inch

6

" " " " " in Boilers

2 7/8"

6

Material of " " "

steel
Double-nuts.

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

1 7/8"

14" x 9"

Diar. of Stays Approved

Threads per Inch

8

" " in Boilers

1 7/8"

Material "

steel
yes.

Are Stays fitted with Nuts outside?

Thickness of Back End Plates at Bottom Approved

" " " " " in Boilers

Pitch of Stays at Wide Spaces between Fireboxes

14" x 9"

Thickness of Doublings in " "

Thickness of Front End Plates at Bottom Approved

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces

1"
1"
one.

Diar. of Stays Approved

" " " " " in Boilers

Pitch of Steam Space Stays

Diar. " " " " 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 Plates Approved

" " " " " in Boilers

Thickness of Doublings in Wide Spaces between Fireboxes

Pitch of Stays at

Diar. of Stays Approved

" " 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



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Diar. of Stays Approved

2 1/2"

Threads per Inch

6

" " in Boilers

2 1/2"

Material "

steel.

Thickness of Front Tube Plates Approved

1"

" " " in Boilers

Pitch of Stay Tubes at Spaces between Stacks of Tubes

14 1/4" x 9"

Thickness of Doublings in

Stay Tubes at

1/4"

Are Stay Tubes fitted with Nuts at Front End

ylo.

Thickness of Back Tube Plates Approved

3/4"

" " " in Boilers

Pitch of Stay Tubes in Back Tube Plates

9" x 11 1/4"

" Plain "

Thickness of Stay Tubes

" Plain "

External Diar. of Tubes

Material "

3 1/4"
Iron.

Thickness of Furnace Plates Approved

3/4" + 1/16"

" " " in Boilers

Smallest outside Diar. of Furnaces

3/4" + 1/16"

Length between Tube Plates

3'-5 3/4"

Width of Combustion Chambers (Front to Back)

2'-9"

Thickness of " " Tops Approved

2 1/32"

" " " in Boilers

Pitch of Screwed Stays in C.O. Tops

9 3/4" x 8 1/2"

Diar. of Screwed Stays Approved

" " in Boilers

Material "

Thickness of Combustion Chamber Plates Approved

" " in Boilers

Pitch of Screwed Stays in C.O. Sides

Diar. " Approved

" " in Boilers

Material "

Thickness of Combustion Chamber Backs Approved

" " in Boilers

Pitch of Screwed Stays in C.O. Backs

Diar. " Approved

" " in Boilers

Material "

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

Thickness of Combustion Chamber Bottoms

No. of Girders over each Wing Chamber

" " " " "

Depth and Thickness of Girders

Material of Girders

No. of Stays in each

No. of Stays in each

No. of Stays in each

No. of Stays in each



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Diar. of Screwed Stays Approved

" " " In Boilers

Material " "

Threads per Inch

Thickness of Combustion Chamber Sides Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Sides

Diar. " " Approved

" " " in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

" " " " in Boilers

Pitch of Screwed Stays in C.O. Backs

Diar. " " Approved

" " " in Boilers

Material " "

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

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

$1\frac{3}{4}"$
 $1\frac{3}{4}"$
 8
 studs.

$2\frac{1}{32}"$
 $2\frac{1}{32}"$
 $9\frac{3}{4}" \times 8"$
 $1\frac{3}{4}"$
 $1\frac{3}{4}"$
 8
 studs.

Centre $5\frac{1}{8}"$ wings $2\frac{1}{32}"$
 $5\frac{1}{8}"$
 $9\frac{3}{4}" \times 9"$
 $1\frac{7}{8}" \times 1\frac{3}{4}"$
 $1\frac{7}{8}" \times 1\frac{3}{4}"$
 studs.

$4\frac{1}{4}"$
 4
 2
 $9\frac{1}{2}" \times 1\frac{1}{2}"$
 studs.
 2

2574
 $16" \times 12"$

VERTICAL DONKEY BOILERS.

No. of Boilers
 Type
 Greatest Int. Diam.
 Height of Boiler Crown above Fire Grate
 Are Boiler Crowns Flat or Dished?
 Internal Radius of Dished Heads
 Description of Stays in Boiler Crowns
 Diam. of Rivet Heads
 Height of Rivet Crowns above Fire Grate
 Are Rivet Crowns Flat or Dished?
 Internal Radius of Dished Crowns
 No. of Crown Stays
 Int. Diam. of Rivet at Top
 Thickness of Plates
 No. of Water Tubes
 Material of Water Tubes
 Size of Manhole in Shell
 Dimensions of Compensation Ring
 Heating Surface, each Boiler
 Grate Surface

SUPERHEATERS

Description of Superheaters

When installed?

Which Boilers are connected to Superheaters?
 Can Superheaters be shut off while Boilers are working?

No. of Safety Valves on each Superheater
 Date of Examination

Date when Safety Valves set
 Pressure on Valves



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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.

No. of Pipes

Material

Internal, Welded or Seamless

Internal Diar.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure



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MAIN STEAM PIPES.

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

No. of Lengths

Material

Brazed, Welded or Seamless

Internal Diam.

Thickness

How are Flanges secured?

Date of Hydraulic Test

Test Pressure

1
copper.
S.D.
4"
6 W.S.
brained.
10-10-29
400 lbs.

STEAM EVAPORATORS.

General Service May 6" x 1/4" x 6"
Feed Pump 6" x 1/4" x 6"

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 | | |

FEED WATER HEATERS.

| No. | Type | |
|------------------|---------------|--------------|
| | | |
| Makers | | |
| Working Pressure | Test Pressure | Date of Test |

FEED WATER FILTERS.

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

LIST OF DONKEY PUMPS.

General Service Key. 6" x 4 1/4" x 6"
Feed Donkey. 6 x 4 1/4" x 6"



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SPARE GEAR.

| No. of Top End Bolts. | No. of Bot. End Bolts. | No. of Cylinder Cover Studs |
|-------------------------|---------------------------|------------------------------------|
| 2 | 2 | |
| " Coupling Bolts 1 set. | " Main Bearing Bolts 2 | " Valve Chest " |
| " Junk Ring Bolts 6 | " Feed Pump Valves 1 set. | " Bilge Pump Valves 1 set. |
| " H.P. Piston Rings | " I.P. Piston Rings | " L.P. Piston Rings |
| " " Springs | " " Springs | " " Springs |
| " Safety Valve " 1 | " Fire Bars 1/2 set. | " Feed Check Valves 1 main 1 stop. |
| " 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 3 | " Condenser Tubes 10 | " Condenser Ferrules 20 |

OTHER ARTICLES OF SPARE GEAR:—

REFRIGERATORS.



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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. | | | |
|--|------------------------------|------------------------|--------------------------------------|----------------------------|-------------------|--------------------------|-----------------------------|
| Masses of Tissue | Understand 3000 | | | | | | |
| Capacity | 45 | 140 | 350 | | | | |
| Current Alternating or Continuous | Continuous | | | | | | |
| Single or Double Wire System | Double | | | | | | |
| Position of Tissue | Starting platform | | | | | | |
| Main Switch Used | | | | | | | |
| No. of Circuits to which Tissues are provided on Main Switch Board | | | 4 | | | | |
| Particulars of these Circuits | | | | | | | |
| Circuit | Number of Turns | Cable Mass | Current Required, Amperes | Time to Complete | Current Available | Continuity of Connection | Temperature Rise, per cent. |
| Primary | | | | | | | |
| 1000/100: 14 | 30 | 4.2 | 7/20 | 2146 | 556 | 90 | |
| 100/100: 6 | 32 | 7.2 | 7/20 | | | | |
| 100/100: 43 | 30 | 12.6 | 7/8 | 2130 | 573 | 30 | |

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

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ELECTRIC LIGHTING

Installation Fitted by

ELECTRIC LIGHTING.
R. Pickens & Sons

No. and Description of Dynamometer

1. Compound waynd.
Underland Forge Run to Td.

Makers of Dynamos

Underland Lagerhus to the

Capacity

45

Amperes at

185

Volts

3.57

Benela Ben Min

Current Alternating or Continuous

Continued

Single or Double Wire System

доyle

Position of Dynamos

Starling platform

„ Main Switch Board

2

4

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

4

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. |
|--------------------|-------------------|---------------|-------------------------|--------------------|------------------|----------------------------|---------------------------------|
| Living Room & Aft. | 14 | 30 | 4.2 | $\frac{3}{20}$ | 2146 | 5516 | 900 |
| Irrigation | 6 | 32 | 7.2 | $\frac{3}{20}$ | " | " | " |
| Deck Load | 43 | 30 | 12.6 | $\frac{3}{8}$ | 2198 | 5230 | " |
| Wipers | 44 Kw. | | | $\frac{3}{22}$ | 1987 | 5283 | 1250 |

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

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. $\frac{1}{8}$ S.W.G., Largest, No. $\frac{7}{16}$ 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?

Ohms.

Is the Installation supplied with a Voltmeter?

" " " an Ampere Meter

Date of Trial of complete Installation 19-10-29. Duration of Trial 6 hours.

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



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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.

Are the Dynamometer, Main and Branch Cables, so placed that the Compressors are

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 Insulation supplied with a Voltmeter?

Date of Trial of complete installation

Have all the requirements of Section 12 been satisfactorily carried out?

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

OKU

J.D. Stephenson

Engineer Surveyor to the British Corporation for the

Survey and Registry of Shipping.

Fees—

MAIN BOILERS.

| | £ | s. | d. |
|--------------------------|---|----|----|
| H.S. <i>1980</i> Sq. ft. | : | : | : |
| G.S. <i>55.5</i> " | : | : | : |

DONKEY BOILERS.

| | £ | s. | d. |
|-----------------------|---|----|----|
| H.S. <i>✓</i> Sq. ft. | : | : | : |
| G.S. <i>~</i> " | : | : | : |

ENGINES.

| | £ | s. | d. |
|-----------------------------|---|----|----|
| L.P.C. <i>16.8</i> Cub. ft. | : | : | : |
| Testing, &c. ... | : | : | : |
| Expenses ... | : | : | : |
| Total ... | : | : | : |

It is submitted that this Report be approved,

James Barr for Chief Surveyor.

Approved by the Committee for the Class of M.B.S.* on the *19th February 1930*

Fees advised

Fees paid



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