

No. 2476

BRITISH AUXILIERS
20 London
F 203
R. W. HEDDERLEY 1859

THE BRITISH CORPORATION REGISTER
OF SHIPPING AND AIRCRAFT.

Report No. 2532 No. in Register Book 4042.

~~ss~~ M.V. "Ben Oliver"

Makers of Engines British Am. Ltd

Works No. F 203

Makers of Main Boilers

Works No.

Makers of Donkey Boiler

Works No.

MACHINERY.

2/35 Start



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005013-005019-0004

No. 2476

THE BRITISH CORPORATION REGISTER
OF SHIPPING AND AIRCRAFT.

Report No. No. in Register Book

S.S.

Makers of Engines

Works No.

Makers of Main Boilers

Works No.

Makers of Donkey Boiler

Works No.

MACHINERY.



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No.

THE BRITISH CORPORATION REGISTER
OF SHIPPING AND AIRCRAFT.

Report No. No. in Register Book

Received at Head Office

Surveyor's Report on the New Engines, Boilers, and Auxiliary
Machinery of the Single Triple Twin Quadruple Scotch

Official No. *164497* Port of Registry *London*

Registered Owners

*National Benyole Co.
London.*

Engines Built by

British Aux. Sta

at

Glasgow

Main Boilers Built by

at

Donkey

at

Date of Completion

19th July 1935

First Visit *21-2-35*

Last Visit

19-7-35

Total Visits

12

*Glasgow 8 Visits
London 4*

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RECIPROCATING ENGINES.

Works No. *E 203* No. of Sets *one* Description *2 strokes**single acting, trunk piston, airless injection*
*direct reversing - Atlas Diesel*No. of Cylinders each Engine *5* No. of Cranks *5*Diars. of Cylinders *180 1/2 7.08"* Stroke *300 mm 11.81"*Cubic feet in each L.P. Cylinder *27* Total *1.35*Are Spring-loaded Relief Valves fitted to ~~Top and Bottom~~ of each Cyl.? *Yes*

" " each Receiver?

Type of H.P. Valves

1st L.P. "

2nd L.P. "

L.P. "

Valve Gear

Condenser

Diameter of Piston Rods (plain part)

Material

Diar. of Connecting Rods (smallest part)

" Crosshead Gudgeons *78 1/2* Length of Bearing *103.5%* Material *Steel*No. of Crosshead Bolts (each) *4* Diar. over Thread *7/8 1/2* Threads per inch *14* Material *Steel*" Crank Pin " " *2* " *902* " *14* " *HT. Steel*" Main Bearings *7* Lengths *1 @ 126 1/2 6 @ 82 1/2*" Bolts in each *2* Diar. over Thread *1 1/8* Threads per inch *14* Material *HT. Steel*" Holding Down Bolts, each Engine *28* Diar. *1 1/8* No. of Metal Chocks *20*

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?

60% fitted bolts
*max. ~ press. 800 lb/in²**mean ind. press. 80*

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 I.H.P.?

Pressure in 1st L.P. Receiver,

lbs., 2nd L.P.,

lbs., L.P.,

lbs., Vacuum,

ins.

Speed on Trial

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

data:—

Builders' estimated ~~I.H.P.~~ *BHP 180*Revs. per min. *450*

Estimated Speed

crankshaft connected to thrust shaft through
Auderson type friction clutch - since main engine
to drive cargo pump in port -

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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 INSTALLATIONS. DESCRIPTION OF MACHINERY.

| | |
|--|--|
| 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 |
| " 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 | S.H.P. | | |
| " " Motors | | | |
| " " 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 | | | |



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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.

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SHAFTING.

Are the Crank Shafts Built or Solid?

Solid

No. of Lengths in each

Angle of Cranks

*4.73 in 120°*Diar. by Rule *4.43*Actual *4.92* *125* In Way of Webs

" of Crank Pins

Length between Webs

Greatest Width of Crank Webs

8.42" 2 1/4" Thickness *2.125" 5/4"*

Least

Diar. of Keys in Crank Webs

Length

Dowels in Crank Pins

Length

Screwed or Plain

No. of Bolts each Coupling

8

Diar. at Mid Length

*30% 1.18*Diar. of Pitch Circle *240%*

Greatest Distance from Edge of Main Bearing to Crank Web

Type of Thrust Blocks

hichel

No. " Rings

one

Diar. of Thrust Shafts at bottom of Collars

3.75 95%

No. of Collars

one

" " Forward Coupling

3.75-

At Aft Coupling

*3.75-*Diar. of Intermediate Shafting by Rule *2.96*

Actual

No. of Lengths

No. of Bolts, each Coupling

*6*Diar. at Mid Length *1 1/8*Diar. of Pitch Circle *10*Diar. of Propeller Shafts by Rule *3.465-*

Actual

3 7/8

At Coupling

3 7/8

Are Propeller Shafts fitted with Continuous Brass Liners?

*No liners*Diar. *in tubes* *over liners* *4", 3 7/8", 4 1/4"*

Length of After Bearings

2' 2 1/8"

Of what Material are the After Bearings composed?

*Cast iron**(Vulcan)*

Are Means provided for lubricating the After Bearings with Oil?

Yes

" " to prevent Sea Water entering the Stern Tubes?

*Yes**(Vulcan gland)*

If so, what Type is adopted?

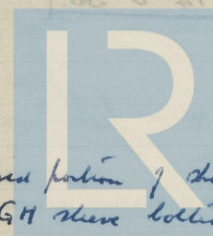
SKETCH OF CRANK SHAFT.

See approved diag.

STAMP MARKS ON SHAFTS

| | | |
|----------|---------|---------|
| B.C. | 86 | 20 |
| NS 21820 | 16 1822 | 14 1822 |
| B.H. | 2 M2 | 18-5-33 |
| 11-2-32 | 10-1-32 | 2LB |

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exposed portion of shaft aft of gland protected by GH sleeve bolted to propeller boss - c.e. shaft good for 3 yrs. running period.

No. of Blades each Propeller

3.

Fitted or Solid?

Solid.

Material of Blades

B. S.

Boss

Diam. of Propellers

4'-3"

Pitch

2'-6"

Surface (each

6.2

S. ft.)

Coefficient of Displacement of Vessel at $\frac{1}{2}$ Moulded Depth

0.73.

Crank Shafts Forged by

Wilehall Shackleton & Co.

Material

Olden Steel

Pins

Webs

Thrust Shafts

Chas. McNeil

W.S.

Intermed.,

Propeller

4 coupling - Stringer & Co Sheffield

Crank " Finished by

Thrust

Intermed.,

Propeller

4 coupling - Rowledge Ironworks.

STAMP MARKS ON SHAFTS.

Crankshaft Thrust
138Propeller shaft
4 coupling

| | |
|---------|---------|
| BE | BE |
| No 125 | No 1635 |
| 18-2-35 | GMS |
| SLB | 10-4-35 |

| |
|----------|
| B.C. |
| No 27850 |
| B.H. |
| 14-5-35 |

SKETCH OF PROPELLER SHAFT.

30.4 6m 33% - 2"

Goldi. Russell

See approved plan



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PUMPS, ETC.

No. of Air Pumps

Diar.

Stroke

Worked by Main or Independent Engines?

No. of Circulating Pumps

Diar.

Stroke

Type of

Diar. of

Suction from Sea

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

Diar.

What other Pumps can circulate through condenser?

No. of Feed Pumps on Main Engine

Diar.

Stroke

Are Spring-loaded Relief Valves fitted to each Pump?

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

No. of Independent Feed Pumps

Diar.

Stroke

What other Pumps can feed the Boilers?

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

What other Pumps can draw from the Bilges?

Are all Bilge Suctions fitted with Roses?

Are the Valves, etc., so arranged as to prevent unintentional connection between Sea and Bilges?

Are all Sea Connections made with Valves or Cocks next the Ship's sides?

Are they placed so as to be easily accessible?

Are the Discharge Chests placed above or below the Deep Load Line?

Are they fitted direct to the Hull Plating and easily accessible?

Are all Blow-off Cocks or Valves fitted with Spigots through the Hull Plating and Covering Plates or Flanges on the Outside?

Air Reservoir by *Boiler Room* *by* *the*

Stamped

Test 720 lbs
W.P. 360
29-4-35

GH
MH

Capacity - 50" off each bottle



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BOILERS

Works No.

No. of Boilers

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 Draught

Can Boilers be worked separately?

Makers of Plates

„ Stay Bars

„ Rivets

„ Furnaces

Greatest Internal Diam. of Boilers

„ „ Length „

Square Feet of Heating Surface each Boiler

„ „ Grate „ „

No. of Safety Valves each Boiler

Rule Diam.

Actual

Are the Safety Valves fitted with Easing Gear?

No. of Pressure Gauges, each Boiler

No. of Water Gauges

„ Test Cocks

„ Salinometer Cocks

Air Reservoirs by Ruston Hornsby Ltd

Stamped

2 @

Test- 720 lbs.

W.P. 360

29-4-35

G.H.
M.H.

Capacity - 5 1/2 cft each bottle.



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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

Dist. of Stays Approved

" " " " in Boilers

Material "

Thickness of Front Tube Plates Approved

" " " " in Boilers

Pitch of Stay Tubes at Space 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

External outside Diam. of Furnaces

Length between Tube Plates

Width of Combustion Chambers (Front to Back)

Thickness of Front End Plates at Bottom Approved

" " " " " in Boilers

No. of Longitudinal Stays in Spaces between Furnaces



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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.O. Sides

Diar. " " Approved

Threads per Inch

in Boilers

Material " "

Thickness of Combustion Chamber Backs Approved

in Boilers

Pitch of Screwed Stays in C.O. Backs

Diar. " " Approved

Threads per Inch

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

VERTICAL DONKEY BOILERS

No. of Boilers

Greatest Lin. Diam.

Height

Height of Boiler Crown above Fire Grate

Are Boiler Crowns Flat or Dished?

Internal Radius of Dished Boilers

Thickness of Plates

Description of Beams in Boiler Crowns

Diar. of Rivet Holes

Height of Rivet Crowns above Fire Grate

Are Rivet Crowns Flat or Dished?

External Radius of Dished Crowns

No. of Crown Stays

Diar.

External Diam. of Rivet as Top

No. of Water Tubes

Hot Diam.

Thickness

Material of Water Tubes

Size of Manholes in Shell

Dimensions of Combustion Flue

Heating Surface, each Boiler

SUPERHEATERS

Description of Superheaters

Where situated?

Which Boilers are connected to superheaters?

Can superheaters be shut off while boilers are working?

Are superheaters fitted with safety valves?

Are superheaters fitted with safety valves?

Date of inspection

Date when Safety Valves are



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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 Length

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

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.

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SPARE GEAR.

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

OTHER ARTICLES OF SPARE GEAR:—

British. and L.A. Spares exceed B.C. requirements



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ELECTRIC LIGHTING.

Installation Fitted by *The Central Electrical Co. Colchester.*
 No. and Description of Dynamos *1 Totally enclosed flameproof.*
 Makers of Dynamos *Island Forge & Eng. Co.*
 Capacity " *45* Amperes, at *110* Volts, *1000* Revols. per Min.
 Current Alternating or Continuous *Continuous.*
 Single or Double Wire System *Double Wire.*
 Position of Dynamos *Main Eng. Room*
 " Main Switch Board *Do.*
 No. of Circuits to which Switches are provided on Main Switch Board *Five.*
 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. |
|-----------------------|-------------------|---------------|------------------------|---------------------------------|------------------|----------------------------|---------------------------------|
| | | | | Amp/ft <i>Amp/ft</i> | | | <i>Megohms.</i> |
| <i>1 Heating</i> | — | — | <i>13</i> | <i>100%</i> | <i>1800</i> | <i>98%</i> | <i>600</i> |
| <i>2 Hotplate</i> | — | — | <i>9</i> | <i>100%</i> | <i>1100</i> | <i>98%</i> | <i>600</i> |
| <i>3 Heating Fans</i> | — | — | <i>13</i> | <i>100%</i> | <i>1800</i> | <i>98%</i> | <i>600</i> |
| <i>4 Lighting New</i> | <i>4</i> | <i>160 W.</i> | <i>1.5 A.</i> | <i>100%</i> | <i>750</i> | <i>98%</i> | <i>600</i> |
| <i>5 " General</i> | <i>25</i> | <i>30 W.</i> | <i>7</i> | <i>100%</i> | <i>1000</i> | <i>98%</i> | <i>600</i> |

Total No. of Lights *29* No. of Motors driving Fans, &c. — No. of Heaters *4* *Hotplate*
 Current required for Motors and Heaters *37 Amps.*

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

all controls in main switchboard except Navigation Indicator in wheelhouse.

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. *3/029* S.W.G., Largest, No. *19/052* 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

Yes.

Yes.

No reduction in cable size.

Yes.

Yes.

Yes.

Yes.

Yes.

Lead sheathed in steel tubes.

do.

See above

None.

W.T. glands.

Are all Joints in Cables properly soldered and thoroughly Insulated so that the efficiency of the Cables is unimpaired? *No joints*

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

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?

Total of 4

Ohms

Is the Installation supplied with a Voltmeter?

Yes

" " " an Ampere Meter

Yes

Date of Trial of complete Installation *11th July 1935* Duration of Trial

at sea 4 hrs. at yard 1 1/2 "

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

Yes.



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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 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. "*Ben Olliver*"

as ascertained by ^{us} from personal examination

G. W. Sellar. B. Hodgson.
Engineer Surveyor to the British Corporation Register
of Shipping and Aircraft.

Fees—

MAIN BOILERS.

£ s. d.

H.S. Sq. ft. : :

G.S. " : :

DONKEY BOILERS.

H.S. Sq. ft. : :

G.S. " : :

£ : :

ENGINES.

L.P.C. *see* Cub. ft. 18 : - : -

£ : :

Testing, &c. ... : :

£ : :

Expenses ... : :

Total ... £ : :

It is submitted that this Report be approved,

Chief Surveyor.

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

14 JUL 1937

Fees advised

Fees paid



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Secretary.

GENERAL CONDITIONS

and the whole of the property of the company, and the company shall be bound to pay the same to the company.

U.S. 100.00

G.S. 100.00

BOOKS 100.00

U.S. 100.00

G.S. 100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00

100.00



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Facing East index

Rug. Con/roads

B 3367 140 : 8 LB

3370

3373

3372

3371

do

Seawings Con/roads

139 SLB

" Sutton/road

141 SLB



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Hyd. Ints.

Cylinder blocks. 1 off 60 HP² 25/3/35 Snd
 covers 3 off 750 " "
 oil cooler 1 " "
 air receiver heads 2 710 " "
 Cylinder covers 2 off 60 1-4-35 Snd
 compressor cu. coil 750 "
 " HP cyls. 750 11-4-35 Snd
 " Water jacket 60 10-4-35 "
 cylinder covers 1 off spare 60 24-4-35 Snd

18-4-35 But. 400³ only

18-4-35

Shop time (full load - 11 hr) (overload +10% + 1 hr)

180 BHP @ 450 RPM.

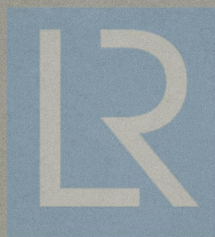
max P 775 MI

Scav. air 2.2

 tech. temp °C. 269 - 292 - 270 - 265 - 256^S


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