

## REPORT ON OIL ENGINE MACHINERY.

No. 117946.

Received at London Office

24 JUN 1942

Date of writing Report

19

When handed in at Local Office

19

Port of

No. in  
Reg. Book.

Survey held at

Date, First Survey

July 31<sup>st</sup>/41.

Last Survey

May 28

1942

Number of Visits

23

Single  
on the ~~Twin~~  
Triple  
Quadruple

Screw vessel

M.V.

"R.N. AIR 2A"

Tons

Gross

259

Net

Built at

Northwich

By whom built

W. J. Yarwood &amp; Sons (1938) Ltd

Yard No. 668

When built

1942

Engines made at

Keighley

By whom made

H. Widdop &amp; Co. Ltd

Engine No. 4064

When made

1942

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power 300 2350 RPM

Owners

Fleet Air Arm

Port belonging to

Nom. Horse Power as per Rule

139

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines See Manchester Report No. 10848. 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

Mean Indicated Pressure

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

Is there a bearing between each crank

Revolutions per minute

Flywheel dia.

Weight

Means of ignition

Kind of fuel used

Crank Shaft,

Solid forged  
Semi built  
All builtdia. of journals  
as per Rule  
as fitted

Crank pin dia.

Crank Webs

Mid. length breadth  
Mid. length thickness

shrunk

Thickness parallel to axis  
Thickness around eyehole

Flywheel Shaft, diameter

as per Rule  
as fitted

Intermediate Shafts, diameter

as per Rule  
as fitted

Approved 3.932

Thrust Shaft, diameter at collars

as per Rule  
as fitted

Tube Shaft, diameter

as per Rule  
as fitted

Screw Shaft, diameter

as per Rule  
as fitted

Approved 4.1502

4 1/2 (4 3/4 at top)

Is the tube screw shaft fitted with a continuous liner

No

Bronze Liners, thickness in way of bushes

as per Rule  
as fitted

Thickness between bushes

as per Rule  
as fitted

Is the after end of the liner made watertight in the

propeller boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners

Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft

Yes

If so, state type Yarwood's Approved

Length of Bearing in Stern Bush next to and supporting propeller

18"

Propeller, dia. 4'-9"

Pitch

3'-10"

No. of blades

3

Material C.I.

whether Moveable

No

Total Developed Surface

9 1/2 sq. feet

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Means of lubrication

Thickness of cylinder

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. One M.E.; and connections from

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

yes

Bilge Pumps worked from the Main Engines, No. One

Diameter 4 1/4"

Stroke

3"

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

1-4 1/4" x 3"

1-Cent. 32 tons/hr.

3-cyl Aux. Engine

How driven

M. Eng.

Is the cooling water led to the bilges

No

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size 1 Cent. 32 tons/hr.

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

(Spare)

Are two independent means arranged for circulating water through the Oil Cooler

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

(1-2 1/2")

2-2"

Also suction to hand pump

In Pump Room

In Holds, &amp;c.

3-2"

Branch or duct from M.E. Bilge pump

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

1-2 1/2"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

yes

Are the Bilge Suctions in the Machinery Spaces

ed from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

yes

Are all Sea Connections fitted direct on the skin of the ship

On Kingston Boxes

Are they fitted with Valves or Cocks

Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

yes

Are the Overboard Discharges above or below the deep water line

Below, but above light draft line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

What pipes pass through the bunkers

None

How are they protected

yes

What pipes pass through the deep tanks

Suction from fore peak tank

Have they been tested as per Rule

yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

yes

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another

yes

Is the Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Savenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule  
as fitted

See Man. Reports No. 10846, No. 10847.

Position

Have the Auxiliary Engines been constructed under special survey

yes

Is a report sent herewith

yes

009682-009688-0250

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AIR RECEIVERS:—Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Injection Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

Starting Air Receivers, No.

Seamless, lap welded or riveted longitudinal joint

IS A DONKEY BOILER FITTED?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

Donkey Boilers

Oil Fuel Burning Arrangements

Cubic capacity of each

Material

Total cubic capacity

Material

State No. of Report or Certificate

Is a drain fitted at the lowest part of each receiver

Internal diameter

thickness

Range of tensile strength

Working pressure

by Rules

Actual

Internal diameter

thickness

Range of tensile strength

Working pressure

by Rules

Actual

If so, is a report now forwarded?

No

17.12.40

Receivers

Separate Fuel Tanks

Pumping Arrangements in Machinery Space

27-5-41

General Pumping Arrangements

27.5.41

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

Yes  
as per list attached.

W. J. YARWOOD & SONS (1938) LTD.

The foregoing is a correct description,

Managing Director

Manufacturer.

Dates of Survey while building

During progress of work in shops--

During erection on board vessel--

Total No. of visits

July 31, Aug 27, Oct 15, Nov 12, 20, Dec 19, Jan 2, 15, 26, Feb 12, 24, Mar 7, 20, 26, Apr 2, 8, 15, 22, 29, May 6, 12, 13, 28

Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

Propeller

Stern tube

Engine seatings

Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements

Engines tried under working conditions

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

Identification Marks on Air Receivers

CTC  
n: 54588

CTC  
n: 54600

Ruston.  
D. 808. Ho 81.167.

Is the flash point of the oil to be used over 150° F.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

Is this machinery duplicate of a previous case

If so, state name of vessel

General Remarks

(State quality of workmanship, opinions as to class, etc.)

constructed under special survey and in accordance with the approved specification, and has been satisfactorily fitted on board.

The Machinery has been examined under working conditions during a full power trial in the River Mersey with satisfactory results, and is eligible in my opinion to be classed, with a notation of + LMC 5.42.

TS. OG

Su Lon. letter M. of 28.11.41

The amount of Entry Fee

£

:

When applied for,

Ball Special

£

:

When received,

Donkey Boiler Fee

£

:

Travelling Expenses (if any)

£

:

Committee's Minute

LIVERPOOL

Assigned

+ LMC 5.42 O.G.

Cur Reed

Engineer Surveyor to Lloyd's Register of Shipping.



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