

REPORT ON OIL ENGINE MACHINERY.

No. 66338.

Received at London Office 26 NOV 1942

Date of writing Report 19

When handed in at Local Office 23.11.42

Port of 5 Glasgow

No. in Survey held at Reg. Book.

5 Glasgow

Date, First Survey June 13th (1941)

Last Survey 16.11.1942

Number of Visits 38

on the Single Triple Quadruple Screw vessel

"NACELLA"

Tons Gross 8196
Net 4774

Built at Wallsend

By whom built Swan, Hunter & Wigham Richardson Ltd

Yard No. 1675 When built 1942

Engines made at 5 Glasgow

By whom made Harland & Wolff, Ltd

Engine No. A/79 When made 1942

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 3300

Owners Grimsby Saxon Petroleum Co Ltd

Port belonging to London

Nom. Horse Power as per Rule 490

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines Heavy oil. Airless Injection

2 or 4 stroke cycle 4 Single or double acting S.A.

Maximum pressure in cylinders 700 lb

Mean Indicated Pressure 128

Diameter of cylinders 740 mm

Length of stroke 1500 mm

No. of cylinders 6

No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 972 mm

Is there a bearing between each crank yes

Revolutions per minute 110

Flywheel dia. 2489 mm

Weight 2590 Kgs.

Means of ignition Compression

Kind of fuel used Diesel oil

Crank Shaft,

Solid forged

dia. of journals

All built

as per Rule Appl. 505 mm.

as fitted 505 mm.

Bored 115 mm.

Crank pin dia. 505 mm

Bored 230 mm

Mid. length breadth 980 mm

Mid. length thickness 310 mm

Thickness parallel to axis 310 mm

Thickness around eyehole 292.5 mm

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

fitted

Thrust Shaft, diameter at collars

as per Rule Appl. 454 mm.

as fitted 454 mm.

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the tube

screw

shaft fitted with a continuous liner

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 If so, state type

Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia.

Pitch

No. of blades

Material

whether Moveable

Total Developed Surface

sq. feet

Method of reversing Engines Direct

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

7 inch

Thickness of cylinder liners 53 mm

641 mm.

Are the cylinders fitted with safety valves yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material Lagged 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.

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

Bilge Pumps worked from the Main Engines, No. none

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

How driven

Is the cooling water led to the bilges

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

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

Engine driven, 100 tons/hour

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

In Holds, &c.

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

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

Are the Bilge Suctions in the Machinery Spaces

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

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

Are they fitted with Valves or Cocks

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

Are the Overboard Discharges above or below the deep water line

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

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

What pipes pass through the bunkers

How are they protected

What pipes pass through the deep tanks

Have they been tested as per Rule

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

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

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

Scavenging Air Pumps, No.

Diameter

Stroke

Driven by

Auxiliary Engines crank shafts, diameter

as per Rule

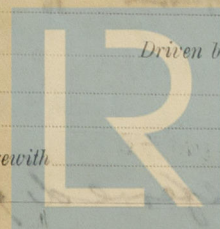
as fitted

No.

Position

Have the Auxiliary Engines been constructed under special survey

Is a report sent herewith



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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.

Cubic capacity of each

Seamless, lap welded or riveted longitudinal joint

Material

Starting Air Receivers, No.

Total cubic capacity

Seamless, lap welded or riveted longitudinal joint

Material

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

(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

FOR FARLAND AND WOLFE, LIMITED

Wm. J. Wright.

Manufacturer.

Dates of Survey while building

During progress of work in shops--
During erection on board vessel--
Total No. of visits

1942. May 13. June 3. 8. 9. 10. 13. 14. 15. 20. July 11. 20. 28. June 5. 12. 17. 23. 25. 29.
July 3. 6. Aug 14. 13. 14. 17. 18. 25. 29. Oct 10. 23. Nov 16.

Dates of Examination of principal parts—Cylinders 3-7-42 Covers 3-7-42 Pistons 29-6-42 Rods 29-6-42 Connecting rods 13-8-42

Crank shaft 3-3-42 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 Steel Identification Mark 8458/2 TEST N°3 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

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

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

Description of fire extinguishing apparatus fitted

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 Yes If so, state name of vessel Engines A/78 MSM. Glasgow Rpt. No. 66106

General Remarks (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under Special Survey in accordance with the Rules of this Society, the approved plans, & the Ministry of War Transport Specification. The materials and workmanship are good.

Shop trials have been satisfactorily carried out.

The machinery has been despatched to the Yard of Messrs Swan, Hunter, & Wigham Richardson, Ltd; to be installed on board their yard No. 1675. It will be eligible in my opinion to be classed in the Register Book with the notation -I-LMC C.L. with date when efficiently installed on board the vessel & tried under working conditions.

These Engines have been satisfactorily fitted on board the vessel M.V. "NACELLA" and tested under working conditions

The amount of Entry Fee £ 5 : -
Special Specification £ 65 : 13
Donkey Boiler Fee £ 16 : 8
Travelling Expenses (if any) £ : :
When applied for, 24 NOV 1942
When received, 19

Committee's Minute GLASGOW 24 NOV 1942

Assigned Deferred for comp.

P. Fitzgerald.

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 16 JUL 1943

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