

18 JAN 1945

Sl. No. 34416

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RECEIVED

Rpt. 4b.

14 JAN 1945

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 52 MAR 1945

Date of writing Report 8th JAN 1945.When handed in at Local Office 11th JAN 1945.

Port of GREENOCK

No. in Survey held at GREENOCK.

Date, First Survey 31st MARCH 1944, Last Survey 10th JANUARY 1945.

Reg. Book.

Number of Visits 19

72981 on the ^{Single} ~~Pair~~ ^{Triple} ~~Quadruple~~ Screw vessel.

"DERWENTDALE"

Tons Gross 8398
Net 4910

Built at BELFAST

By whom built HARRISON & WOLFE L^{ts}

Yard No. When built 1940

Engines made at GREENOCK

By whom made JOHN G. KINCAID & CO L^{ts}

Engine No 4170 When made 1945

Donkey Boilers made at

By whom made

Boiler No. When made

Brake Horse Power 3306

Owners THE ADMIRALTY

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 Diesel airless injection Buchi Sup^{er} 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 650 lb./sq. in.

Mean Indicated Pressure 8.725 Kg./cm²

Diameter of cylinders 740

Length of stroke 1500

No. of cylinders 6

No. of cranks 6

Span of bearings, adjacent to the crank, measured from inner edge to inner edge 1022

Is there a bearing between each crank 4/0

Revolutions per minute 110

Flywheel dia. 2489

Weight 2.5 tons

Means of ignition Compression

Kind of fuel used Diesel oil

Crank Shaft, ^{Solid forged} ~~Semi built~~ ^{All built}

dia. of journals as per Rule 505

Crank pin dia. 505

Crank webs

Mid. length breadth 840

Thickness parallel to axis 310

Wheel Shaft, diameter as per Rule

Intermediate Shafts, diameter as per Rule

Thrust Shaft, diameter at collars as per Rule

Tube Shaft, diameter as per Rule

Screw Shaft, diameter as per Rule

Is the tube shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule

Thickness between bushes as per Rule

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 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 Air ram

Is a governor or other arrangement fitted to prevent racing of the engine when declutched 4/0

Means of

lubrication Forced

Thickness of cylinder liners 327

Are the cylinders fitted with safety valves 4/0

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 1-10

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

Bilge Pumps worked from the Main Engines, No

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 1-10x10" MAIN ENGINE

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 pump room

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 suction 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

No.

Position

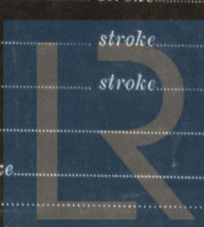
Have the auxiliary engines been constructed under special survey

Is a report sent herewith

Nov 29/45

013627-013631-0196 1/2

A special correspondence to be forwarded to the office



Lloyd's Register Foundation

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AIR RECEIVERS:—Have they been made under survey.....State No. of report or certificate.....

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.....Is a drain fitted at the lowest part of each receiver.....

Injection Air Receivers, No.....Cubic capacity of each.....Internal diameter.....thickness.....by Rules.....

Seamless, lap welded or riveted longitudinal joint.....Material.....Range of tensile strength.....Working pressure.....Actual.....

Starting Air Receivers, No.....Total cubic capacity.....Internal diameter.....thickness.....by Rules.....

Seamless, lap welded or riveted longitudinal joint.....Material.....Range of tensile strength.....Working pressure.....Actual.....

IS A DONKEY BOILER FITTED.....If so, is approval now forwarded.....

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

PLANS. Are approved plans forwarded herewith for shafting.....22-12-43.....Receivers.....Separate fuel tanks.....

(If not, state date of approval)

Donkey boilers.....General pumping arrangements.....Pumping arrangements in machinery space.....

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 JOHN G. KINGALD & CO. LIMITED, Manufacturer.
Director.

Dates of Survey while building
During progress of work in shops - - (1944) MARCH 31. APRIL 13. MAY 12. 19. JUNE 6. 21. JULY 20. AUG. 29. 30. SEPT. 1. 7. 11. 25. 28. OCT. 19. NOV. 23. 24. DEC. 27.
(1945) JAN. 10.

During erection on board vessel - -

Total No. of visits.....

Dates of examination of principal parts—Cylinders.....29/5/44 to 2/10/44.....Covers.....29/5/44 to 2/10/44.....Pistons.....29-8-44.....Rods.....27-12-44.....Connecting rods.....27-12-44.....

Crank shaft.....27-12-44.....Flywheel shaft.....Thrust shaft.....27-12-44.....Intermediate shafts.....Tube shaft.....

Screw shaft.....Propeller.....Stern tube.....Engine seatings.....Engine holding down bolts.....

Completion of fitting sea connections.....Completion of pumping arrangements.....Engines tried under working conditions.....

Crank shaft, material.....SM5.....Identification mark.....LR12114.....Flywheel shaft, material.....Identification mark.....

Thrust shaft, material.....SM5.....Identification mark.....LR13976.....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.....

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.....If so, state name of vessel.....

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

This engine has been constructed under special survey in accordance with the Rules & approved plans. The MOWT specification & plans have been supervised. The materials & workmanship are sound & good. The engine has been dispatched to Sunderland to be installed in the vessel & will be eligible for record & LMC with date when completed.

The Receipt is ex Denbydale Gork op' N° 21284
Certificate for forgings ex stock orders will be forwarded on completion of contracts

The amount of Entry Fee ... £ 6 :
338-198-10 + 25% Spec ... £ 82 : 2
Special ...

Donkey Boiler Fee... £ :

Travelling Expenses (if any) £ :

When applied for 11th JANY 1945

When received 19

Committee's Minute GLASGOW 16 JAN 1945

Assigned Referred for Completion

Check of Hanks
Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation