

pt. 4b.

RECEIVED

AUXILIARY

REPORT ON/OIL ENGINE MACHINERY.

951

No. 13827.



Received at London Office

1 OCT 1949

1st September, 49 27th September, 49

When handed in at Local Office Port of

MANCHESTER.

HAZEL GROVE, STOCKPORT.

31st January, 1949

Last Survey 21st June, 1949.

Survey held at

Date, First Survey

Number of Visits 10.

Single
on the Twin
Triple
Quadruple
Screw vessel.

Classed Vessel (Yard No. 629).

Tons
Gross
Net

By whom built Richard Dunstan Ltd.

Yard No. 629. When built

Hazeltrove.

By whom made Mirrlees, Bickerton & Day Ltd.

Engine No. 33402 When made 1949.

Monkey Boilers made at

By whom made

Boiler No. When made

225 (12 hr. rating) Owners St. Andrews Steam Trawling Co.

Port belonging to Fleetwood.

56.25

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Is Refrigerating Machinery fitted for cargo purposes

Trade for which vessel is intended Trawling.

L ENGINES, &c. —Type of Engines.

Mirrlees Type TLA.5 Heavy Oil.

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

Maximum pressure in cylinders 800 lbs./sq. inch

Diameter of cylinders 8 1/2"

Length of stroke 13 3/4"

No. of cylinders 5. No. of cranks 5.

Mean Indicated Pressure 116 lbs./sq. inch

Ahead Firing Order in Cylinders 1, 3, 5, 4, 2.

Span of bearings, adjacent to the crank, measured

from inner edge to inner edge 8.5/8"

Is there a bearing between each crank Yes.

Revolutions per minute 500.

Flywheel dia. 4' - 0"

Weight 1310 lbs.

Moment of inertia of flywheel (lbs. in² or Kg. cm.²)

1320 lbs. in sec²

Kind of fuel used Diesel

Crank Shaft, Solid forged

dia. of journals 5 1/2"

As approved.

Crank pin dia. 5.9/16"

Crank webs

Mid. length breadth 9 1/2"

Thickness parallel to axis

At built

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

as fitted

Flywheel Shaft, diameter of crankshaft. Intermediate Shafts, diameter

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

Tube Shaft, diameter

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

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

under Propeller, dia.

Pitch

No. of blades

Material

whether moveable

Total developed surface

sq. feet

Moment of inertia of propeller (lbs. in² or Kg. cm.²)

Kind of damper, if fitted

Method of reversing Engines

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

Means of

lubrication

Thickness of cylinder liners

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. 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

No. and size

How driven

One: Engine driven gear

Type: Capacity 666

galls/hr

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 they each fitted with a discharge valve always accessible on the plating of the vessel

Are the overboard discharges above or below the deep water line

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

Position

Is a report sent herewith

Have the auxiliary engines been constructed under special survey

Is a report sent herewith

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11-10-96 1200 11200

AIR RECEIVERS:—Have they been made under survey Yes, as reported for Engine No. 33401. 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, 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, welded or riveted longitudinal joint.

Material.

Range of tensile strength.

Working pressure.

Actual.

IS A DONKEY BOILER FITTED

If so, is a report now forwarded.

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

PLANS. Are approved plans forwarded herewith for shafting.

3rd May, 1949.

Receivers.

Separate fuel tanks.

Owners.

Donkey boilers.

General pumping arrangements.

Pumping arrangements in machinery space.

Oil fuel burning arrangements.

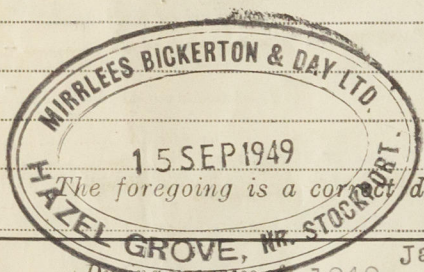
Have Torsional Vibration characteristics been approved Yes: for 500 R.P.M.

Date of approval 13th June, 1949.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes.

State the principal additional spare gear supplied.



The foregoing is a correct description, and the particulars of the installation as fitted are as approved by the Chief Draughtsman, Manufacturer for Torsional Vibration Characteristics.

Dates of Survey while building

During erection on board vessel - - -

Total No. of visits.

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.

Engine holding down bolts.

Completion of fitting sea connections.

Completion of pumping arrangements.

Engines tried under working conditions.

Crank shaft, material O.H. Steel.

Identification mark.

Lloyd's 5794.

Flywheel shaft, material.

Identification mark.

Thrust shaft, material.

Identification mark.

R.J. 31.1.49.

Intermediate shafts, material.

Identification marks.

Tube shaft, material.

Identification mark.

Screw shaft, material.

Identification mark.

Identification marks on air receivers.

Welded receivers, state Makers' Name.

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 built under Special survey)

of tested materials and in accordance with the Secretary's letters, approved plans and Rule requirements. The materials and workmanship are good. The engine, direct coupled to a Heenan & Froude Dynamatic Dynamometer, was tested at the Builders Works under the following conditions of loading and found satisfactory: 5 Hours 100% Load, 1 Hour 110% Load.

Torsional vibration characteristics of the shafting installation for this auxiliary machinery have been approved for a service speed of 500 Revs. per min. It is intended that this engine will be direct coupled to a Hyland Pump, through a flexible pin type coupling and, in our opinion, is suitable for installation in a vessel classed with this Society for the purpose intended.

Forging Report No. F.5828 attached herewith.

The amount of Entry Fee ... £ 11 5 0

Special ... £ :

When applied for 27.9.19

Donkey Boiler Fee... £ :

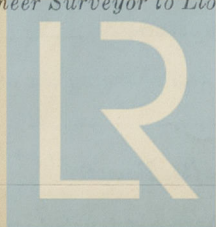
When received 19

Travelling Expenses (if any) £ 3 0 0

Committee's Minute ERI 2 JUN 1950

Assigned Sir F.E. Mch. H.A.

Certificate (if required) to be sent to



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