

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 14526.

Date of writing Report 28 Sept 1940 When handed in at Local Office 10 Port of Bristol
 No. in Survey held at Dursley Date, First Survey 24 April Last Survey 25 Sept 1940
 Reg. Book. MS Empire Cliff Number of Visits 2
 Single on the Twin Triple Quadruple Screw vessel Tons Gross Net

Built at Dursley By whom built R.A. Lister Ltd. Yard No. 60/6522 When built 1940
 Engines made at Dursley By whom made R.A. Lister Ltd. Engine No. 1940 When made 1940
 Donkey Boilers made at Dursley By whom made R.A. Lister Ltd. Boiler No. 1940 When made 1940
 Brake Horse Power 27 Owners MS Empire Cliff Port belonging to MS Empire Cliff
 Nom. Horse Power as per Rule 27 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
 Trade for which vessel is intended Merchant

OIL ENGINES, &c.—Type of Engines 4 J.P. Lister Heavy Oil 2 or 4 stroke cycle 4 Single or double acting single
 Maximum pressure in cylinders 150 lb - 800 lb/sq in Diameter of cylinders 4 1/2" Length of stroke 5 1/2" No. of cylinders 3 No. of cranks 3
 Mean Indicated Pressure 113 lb/sq in Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6 1/16" Is there a bearing between each crank Yes
 Revolutions per minute 1000 Flywheel dia. 26" Weight 2294 lbs Means of ignition Compression Kind of fuel used Diesel
 Crank Shaft, Solid forged dia. of journals as per Rule 3" Crank pin dia. 3" Crank Webs Mid. length breadth 3 1/2" Thickness parallel to axis shrunk
All built as fitted 3" Mid. length thickness 1 1/16" Thickness around eyehole shrunk
 Flywheel Shaft, diameter as per Rule 3" Intermediate Shafts, diameter as per Rule 3" Thrust Shaft, diameter at collars as per Rule 3"
 Tube Shaft, diameter as per Rule 3" Screw Shaft, diameter as per Rule 3" Is the tube screw shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule 3" Thickness between bushes as per Rule 3" Is the after end of the liner made watertight in the
 propeller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes
 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 Yes
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft Yes If so, state type Oil Gland Length of Bearing in Stern Bush next to and supporting propeller 12"
 Propeller, dia. 36" Pitch 20" No. of blades 3 Material Cast Iron whether Moveable No Total Developed Surface 1.5 sq. feet
 Method of reversing Engines Forced Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
Forced Thickness of cylinder liners 5/16" Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Yes
 Cooling Water Pumps, No. One Plunger type 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. 1 Diameter 4" Stroke 10" Can one be overhauled while the other is at work Yes
 Pumps connected to the Main Bilge Line No. and Size How driven Electric
 Is the cooling water led to the bilges Yes If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 arrangements Yes
 Ballast Pumps, No. and size 1 Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 Pumps, No. and size:—In Machinery Spaces 1 In Pump Room 1
 In Holds, &c. 1
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes 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 Yes
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Yes
 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 Yes
 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 Yes How are they protected Yes
 What pipes pass through the deep tanks Yes 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 Yes
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes
 Main Air Compressors, No. 1 No. of stages 1 Diameters 4" Stroke 10" Driven by Electric
 Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 4" Stroke 10" Driven by Electric
 Small Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 4" Stroke 10" Driven by Electric
 What provision is made for first Charging the Air Receivers Yes
 Scavenging Air Pumps, No. 1 Diameter 4" Stroke 10" Driven by Electric
 Auxiliary Engines crank shafts, diameter as per Rule 3" No. 1 Position 1
 Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes

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 No. 30/5/35

(If not, state date of approval)

Receivers

Separate Fuel Tanks

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,

P.P.R.A. LISTER (MARINE SALES) LTD.

Manufacturer.

Dates of Survey while building

During progress of work in shops--

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

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

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, &c.)

This Auxiliary Oil Engine has been built under Special Survey and in accordance with approved plan. All parts were examined in a finished machined condition before assembly. Cylinder heads & jackets tested with hydraulic pressure. The materials and workmanship have been found good.

Upon completion the engine was examined during a six hour full load test bed trial, governor tested and all found satisfactory.

For identification purposes the engine has been stamped Lloyd's Test M891. The Engine made to the order of The Gool Shipbuilding Co.

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

When applied for,

When received,

J. Brooke Smith

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See minute on

Jul 5/1051



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