

Rpt. 4b.

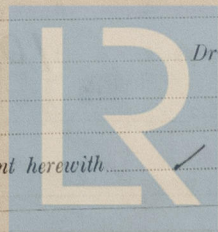
REPORT ON OIL ENGINE MACHINERY.

No 14564.

Date of writing Report 22nd October 1940 When handed in at Local Office 28-10-1940 Port of Bristol
No. in Survey held at Dursley Date, First Survey 24 April Last Survey 21 October 1940
Reg. Book. Single on the Twin Triple Quadruple Screw vessel M.S. Empire Foreland
Number of Visits 2

Built at Dursley By whom built R.A. Lister & Co Ltd Yard No. 60/6523 When built
Engines made at Dursley By whom made R.A. Lister & Co Ltd Engine No. / When made
Donkey Boilers made at By whom made Boiler No. When made
Brake Horse Power 24 Owners Port belonging to
Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted
Trade for which vessel is intended

IL 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 450 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 229 lbs Means of ignition Compressor 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
Flywheel Shaft, diameter as per Rule 3 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 the tube
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
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 5/16 Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with
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
Cooling Water Pumps, No. One, plunger type 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
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 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
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 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



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IR 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 ✓
Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules Actual ✓
Starting Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓
Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules 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 No 30/5/35 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 yes.
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 - 24-4-40, 21-10-40.
During erection on board vessel - 2.
Total No. of visits 2.

Dates of Examination of principal parts - Cylinders 24-4-40 Covers 24-4-40 Pistons 24-4-40 Rods - Connecting rods 24-4-40.
Crank shaft 24-4-40 Flywheel shaft 24-4-40 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 21-10-40.
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. 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 ✓ If so, state name of vessel ✓

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

This Auxiliary D/E 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 head & casing jackets tested with hydraulic pressure 100 lbs. The materials and workmanship have been found good. Upon completion the engine was examined during a six hour full load test bed running trial. Governor tested and all found satisfactory. For identification purposes the engine has stamped Lloyd's Test M. 892. 24-4-40 S. The Engine made to the order of The Gool Shipbuilding Co.

The amount of Entry Fee .. £ 3 : 3 : When applied for, 28-10-1940
Special £ : : When received, 10-12-1940
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : 10 :
Committee's Minute 14 MAR 1941

Assigned See Incl 5 1120



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