

REPORT ON OIL ENGINE MACHINERY.

No. 112190



Received at London Office

Report 2 Nov 1949 When handed in at Local Office 3 Nov 1949 Port of London
Survey held at London Date, First Survey 22 August Last Survey 6 September 1949
Number of Visits 3

Single the Twin Triple Quadruple Screw vessel M.S. CASTLEGATE Tons Gross Net
By whom built By whom made Russell Hewbery & Co. Ltd Yard No. D 2573 When built
When made 1949
By whom made Boiler No. When made
Owners Esso Transport Ltd Port belonging to
Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Type of Engines high speed Compression ignition 2 or 4 stroke cycle 4 Single or double acting single
Pressure in cylinders 850 lbs sq in Diameter of cylinders 5 1/8 Length of stroke 7 1/4 No. of cylinders 4 No. of cranks 4
Ahead Firing Order in Cylinders 1342 Span of bearings, adjacent to the crank, measured
to inner edge 6 3/8 Is there a bearing between each crank Yes Revolutions per minute 1000
Weight 463 lbs Moment of inertia of flywheel 47486 Means of ignition solid Kind of fuel used pool
dia. of journals as per Rule 3 3/4 as fitted 3 3/4 Crank pin dia. 3 5/8 Crank webs Mid. length breadth 4 5/8 shrunk Thickness parallel to axis one
Mid. length thickness 1 9/16 Thickness around eye hole piece

Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted
Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner

Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
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 If so, state type Length of bearing in Stern Bush next to and supporting propeller

Reversing Engines 2/1 Reversing gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of
Thickness of cylinder liners 1/2 Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
Cooling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel
worked from the Main Engines, No. one Diameter Eccentric Vane hour Stroke Can one be overhauled while the other is at work

connected to the Main Bilge Line No. and size How driven
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
Power Driven Lubricating Oil Pumps, including spare pump, No. and size
Independent means arranged for circulating water through the Oil Cooler Suctions, connected to both main bilge pumps and auxiliary
No. and size:—In machinery spaces In pump room

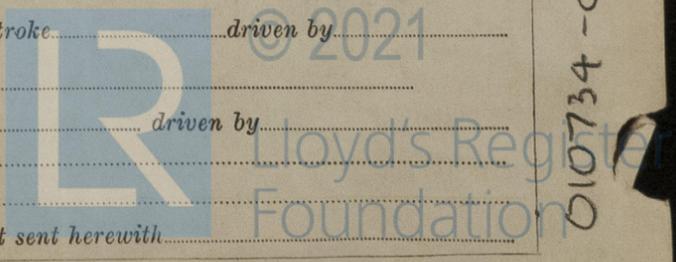
Power Pump Direct Suctions to the engine room bilges, No. and size
bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily
lid-boxes, placed above the level of the working floor, with straight tail pipes to the bilges
connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed
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
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
pass through the bunkers How are they protected
pass through the deep tanks Have they been tested as per Rule

cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times
element 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
room one compartment to another Is the shaft tunnel watertight Is it fitted with a watertight door worked from
sel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Compressors, No. No. of stages diameters stroke driven by
Air Compressors, No. No. of stages diameters stroke driven by
Air Compressors, No. No. of stages diameters stroke driven by
on is made for first charging the air receivers

Air Pumps, No. diameter stroke driven by
engines crank shafts, diameter as per Rule as fitted No. Position
Auxiliary engines been constructed under special survey Is a report sent herewith

P.M.
29/11/49



010734-010743-0092

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.....

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

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

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

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..... Receivers..... Separate fuel tanks.....

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

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved..... Date of approval.....

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, *Russell Newbery & Co. Ltd.* Manufacturer.

Dates of Survey while building: During progress of work in shops - - 22nd, 30th August, 6th September 1949

During erection on board vessel - - -

Total No. of visits *3 in shops*

Dates of examination of principal parts—Cylinders 22-8-49 Covers 22-8-49 Pistons 22-8-49 Rods ✓ Connecting rods 22-8-49

Crank shaft 22-8-49 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 *EN8* Identification mark *LLOYDS 28194849* 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.....

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 and reversing gear have been built under*)

Special Survey of tested materials, the workmanship is good. The engine and Reversing gear were examined during

erection and the engine examined under full load conditions. The reversing gear 3 attached helge 3 circ. water

pumps require to be examined under working conditions. The engine is electrically started, CAV starter No 84426

& charging dynamo is fitted to engine. The set is intended for Esso Transportation Co, London, ord No Alt job 180, 14/4/48

In my opinion this machinery will be eligible for the notation + LMC (will date)

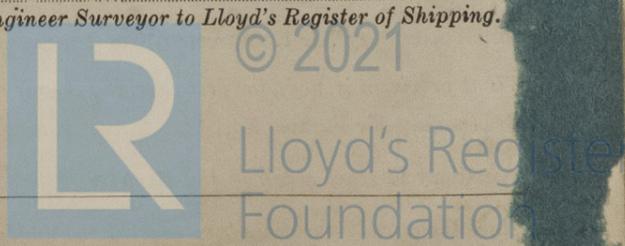
when the installation & trials have been satisfactorily carried out.

The amount of Entry Fee ... £ : : When applied for *3 Nov 1949*

2/3 Special ... £ *13:6:8* : : When received 19..... *W. Selley* Engineer Surveyor to Lloyd's Register of Shipping.

Donkey Boiler Fee... £ : : Travelling Expenses (if any) £ : :

Committee's Minute..... Assigned.....



Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)