4b.

REPORT ON OIL ENGINE MACHINERY.

No. 23229.

Received at London Office 20 MAY 1953

Date of writing Report 6 - 5 - 1953. When handed in at Local Office 8th May, 1953. Port of Leith

Survey held at Leith Date, First Survey 20 - 1 - 1951 Last Survey 22 - 4 - 1953

Number of Visits 24.

Book.

~~Single~~ on the Twin ~~Triple~~ ~~Quadruple~~ Screw vessel Motor Tug M.S.C. "Rover" Tons Gross 154.18 Net ✓

at Leith By whom built Messrs Henry Robb Ltd. Yard No. 416 When built 1953

nes made at Openshaw. By whom made Crossley Bros Ltd. Engine Nos 142827 142828 When made 1953

ey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓

Horse Power { Maximum 600 each engine Service 1200 Total } Owners Manchester Ship Canal Co's Ltd. Port belonging to Manchester

as per Rule 240 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

e for which vessel is intended River and Harbour Towing Services.

ENGINES, &c.—Type of Engines ✓ 2 or 4 stroke cycle ✓ Single or double acting ✓

mum pressure in cylinders ✓ Diameter of cylinders ✓ Length of stroke ✓ No. of cylinders ✓ No. of cranks ✓

Indicated Pressure ✓ Span of bearings (i.e. distance between inner edges of bearings in

of a crank) ✓ Is there a bearing between each crank ✓ Revolutions per minute { Maximum ✓ Service ✓

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wheel dia. ✓ Weight ✓ Moment of inertia of flywheel (lbs. in² or Kg.cm²) ✓ Means of ignition ✓ Kind of fuel used ✓

" " balance wts. (" " " " ") ✓

Solid forged / Semi built / All built dia. of journals as per Rule ✓ as fitted ✓ Crank pin dia. ✓ Crank webs Mid. length breadth ✓ Mid. length thickness ✓ shrunk Thickness parallel to axis ✓ Thickness around eyehole ✓

Wheel Shaft, diameter as per Rule ✓ as fitted ✓ Intermediate Shafts, diameter as per Rule Approved as fitted 9⅞" ✓ Thrust Shaft, diameter at collars as per Rule ✓ as fitted ✓

e Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule Approved as fitted 9" ✓ Is the ~~tube~~ screw shaft fitted with a continuous liner No. ✓

nze Liners, thickness in way of bushes as per Rule ✓ as fitted ✓ Thickness between bushes as per Rule ✓ as fitted ✓ Is the after end of the liner made watertight in the

peller boss ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

he 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-

osive ✓ If two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved Oil Gland fitted at the after

of stern tube Yes If so, state type Vickers Length of bearing in Stern Bush next to and supporting propeller 3' 1"

Propeller, dia. 7.0 Pitch 4.66/3.7 No. of blades 4 Material Cast Iron whether moveable Solid Total developed surface 19.25 sq. feet

ment of inertia of propeller including entrained water (lbs. in² or Kg.cm²) ✓ Kind of damper, if fitted ✓

thod of reversing Engines ✓ Is a governor or other arrangement fitted to prevent racing of the engine ✓ Means of

rication ✓ Thickness of cylinder liners ✓ Are the cylinders fitted with ~~liners~~ casings ✓ Are the exhaust pipes and silencers water cooled

agged with non-conducting material ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

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e to the engine ✓ Cooling Water Pumps, No. and how driven ✓ Working F.W. ✓

✓ Spare F.W. ✓ S.W. ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge Pumps worked from the Main Engines, No. and capacity ✓ Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line { No. and capacity of each 2 @ 50 Tons/hr. 1 @ 20 Tons/hr (Auxiliary Bilge pump) How driven main engine. electric driven.

The cooling water led to the bilges No. 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 capacity ✓ Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 driven by main Engine

Are two independent means arranged for circulating water through the Oil Cooler yes Branch Bilge Suctions ✓

n, and size:—In machinery spaces 1 @ 2½" Eng room forward 1 @ 2½" engine room aft. In pump room ✓

holds, &c. 1 @ 2" forward cofferdam.

Direct Bilge Suctions to the engine room bilges, No. and size 1 @ 2½" S.W. pump suction aft forward of E.R. 1 @ 2½" aux bilge pump aft aft of E.R.

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 to Saddles Are they fitted with valves or cocks valves. 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 Above.

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 ✓

What pipes pass through the bunkers none. How are they protected ✓

What pipes pass through the deep tanks none. 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 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 ✓ 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. manufacturers Report No 15393 No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. Two No. of stages Two diameters 4½" × 1 5/8" stroke 3¼" driven by Electric Motor

Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓

What provision is made for first charging the air receivers Electric generator can be driven by either of two Diesel engines capable of being started by hand.

Scavenging Air Pumps or Blowers, No. manufacturers Report No 15393. Engine Nos.

Auxiliary Engines Have they been made under survey yes. Position of each in engine room Forward end of engine room

Makers name Crossley Bros Ltd. Report No. 15115.

011628-011635-0365

ter Capacity. Tons.
18.1.
10.0
✓
11.8.
6.0.
26.
29.

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

State full details of safety devices ✓

Can the internal surfaces of the receivers be examined and cleaned ✓ Is a drain fitted at the lowest part of each receiver ✓

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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 No. 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 (If not, state date of approval) yes Receivers ✓ Separate fuel tanks

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

Oil fuel burning arrangements ✓

Have Torsional Vibration characteristics been approved yes. Date and particulars of approval 20. 4. 50.

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes. State if for "short voyages" only

State the principal additional spare gear supplied

HENRY ROSS, LIMITED

The foregoing is a correct description. DIRECTOR Manufacturer. 8/5/53

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - - - 1951. Mar 20. Aug 29. Sept 4. 18. Oct 4. 1952. June 25. Sept 9. 25. 30. Oct 10. Nov 18. 19. 24. Dec 1st 2. 9. 25. April 1. 15. 17. 22. 1953. Feb 9. March 2. 5. 9. 12.

Total No. of visits 24.

Dates of examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓

Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓

Screw shaft 11. 7. 52. Propellers 9. 2. 53. Stern tubes 5. 9. 52. 9. 9. 52. Engine seatings 2. 3. 53. Engine holding down bolts 16 - 3.

Completion of fitting sea connections 9 - 2 - 53 Completion of pumping arrangements 23. 3. 53 Engines tried under working conditions 22 - 4.

Crank shaft, material ✓ Identification mark ✓ Flywheel shaft, material ✓ Identification mark ✓

Thrust shaft, material ✓ Identification mark ✓ Intermediate shafts, material Forged steel Identification marks P. 5270. C. S. 5241. C. 11. 7. 52

Tube shaft, material ✓ Identification mark ✓ Screw shaft, material Forged steel Identification mark P-5272-C S. 5273-C 11. 7. 52

Identification marks on air receivers ✓

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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 yes.

Full description of fire extinguishing apparatus fitted in machinery spaces as per approved plan.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. If so, have the requirements of the Rules been complied with ✓

What is the special notation desired ✓

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 yes. If so, state name of vessel M.S.C. Quarry Queen & Ranger.

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

This machinery has been satisfactorily fitted on board in accordance with the requirements of the Rules and Approved plans.

The materials and workmanship have been found good.

Upon completion satisfactory sea trials under full working conditions were carried out.

In accordance with Glasgow Surveyor's letter dated 28. 4. 50 the governor has been adjusted to prevent the engine Speed rising above 280 rpm.

It is recommended that the record of ✠ L.M.C. 4/53, OIL ENGINES. T.S.(O.G.) be made in the Register Books.

11/5/53

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

The amount of Entry Fee ... ... £ 55-H-0 ✓

Special ... ... £ :

Donkey Boiler Fee... ... £ :

Travelling Expenses (if any) £ :

When applied for 8/5/53. 19

When received 19

Thomas Donaldson.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 MAY 1953

Assigned +LMC. 4. 53. Oil Engines with torsional endorsement