

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 32174

AUG 20 1937

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 AUG. 1937 Port of Sunderland.

No. in Survey held at Sunderland Date, First Survey July 24 Last Survey Aug 18 1937
Reg. Book. Number of Visits 24on the ~~Single~~ ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "RODSLEY" TROMA Tons Gross ? Net ?

Built at Sunderland By whom built Wm. Dorriford & Sons Ltd. Yard No. 638 When built 1934

Engines made at Newcastle By whom made Swan Hunter & Wigham Richardson Engine No. 1550 When made 1934

Donkey Boilers made at Stockton By whom made Stockton Chem. Eng. & Riley Bros & Co. 6258 When made 1934

Brake Horse Power 1800 Owners Thomas Shipping Co. Ltd. Port belonging to Newcastle

Nom. Horse Power as per Rule 388 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted Yes.

Trade for which vessel is intended

L ENGINES, &c.—Type of Engines Please See Nue Rpt. 95287 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Mean Indicated Pressure

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute 115 Flywheel dia. Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the screw shaft fitted with a continuous liner Yes.

Bronze 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 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

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

shaft no. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 14'-0" Pitch 10'-6" No. of blades 4 Material Bronze whether Moveable no. Total Developed Surface 80 sq. feet

Method of reversing Engines Hand lever Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes. Means of lubrication

and forced Thickness of cylinder liners Are the cylinders fitted with safety valves Yes. 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

Cooling Water Pumps, No. 2 one engine driven 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. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 2 6" x 5 1/2" x 15" Simplex How driven Steam

Is 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 size 1 @ 12" x 10 1/2" x 24" Simplex Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one main eng. driven

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 4 @ 3" in E.R. 1 @ 3" in Tunnel Well In Pump Room

In Holds, &c. N°1. 3 1/2" φ 18" N°2. 3 1/2" φ 18" N°3. 3" φ 15" N°4. 3 1/2" φ 18" Sup. Tank. 3 1/2" φ 18"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 8" (Ballast pump) 1 @ 5"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes.

Are they fitted with Valves or Cocks Both.

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes.

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes.

What pipes pass through the bunkers none.

What pipes pass through the deep tanks Forward bilge suction 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 E.R. top plating.

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. Two No. of stages 3 Diameters 10 1/2" 8 1/2" 2 1/2" Stroke 6 Driven by Steam engine 11 1/2" x 6" Stroke

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

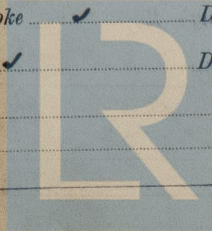
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted No. Position

2.24.26

7.10



AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yls.* (On discharge from compressor *Yls.*)

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

High Pressure Air Receivers, No. *none* Cubic capacity of each *Yls.* Internal diameter *Yls.* thickness *Yls.*

Seamless, lap welded or riveted longitudinal joint *Yls.* Material *Yls.* Range of tensile strength *Yls.* Working pressure by Rules *Yls.* Actual *Yls.*

Starting Air Receivers, No. *Two* Total cubic capacity *180 Cufe.* Internal diameter *3'-6"* thickness *Yls.*

Seamless, lap welded or riveted longitudinal joint *Yls.* Material *Yls.* Range of tensile strength *24/32* Working pressure by Rules *603* Actual *600.*

IS A DONKEY BOILER FITTED?

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

PLANS. Are approved plans forwarded herewith for Shipping (If not, state date of approval) *Yls.*

Donkey Boilers *Yls.* General Pumping Arrangements *Yls.* Pumping Arrangements in Machinery Space *Yls.*

Oil Fuel Burning Arrangements *Yls.*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yls.*

State the principal additional spare gear supplied

1 Cast iron Propeller, 1 Screw Shaft, 2 Port & 2 Back Fuel Valves Complete, 8 Spray Nozzles, 1 Starting air return valve Complete, 1 Cylinder Relief valve Complete, 4 Scavenge pump Suct. & Del. valve discs, 1 Fuel pump body Complete, 1 roller chain for camshaft drive, 1 upper & 1 lower piston rod & 3 piston heads Complete, 1 Cylinder liner & jacket Complete.

The foregoing is a correct description,

WILLIAM DOXFORD & SONS, Limited.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1936. *Mar. 24. Apr. 13. 14. 16. 19. 20. 21. 23. 26. 28. 30. May. 5. 10. 20. 24. June 11. July 1. 21. 23.*
During erection on board vessel - *Aug. 4. 6. 10. 16. 18*
Total No. of visits *24*

Dates of Examination of principal parts—Cylinders *Yls.* Covers *Yls.* Pistons *Yls.* Rods *Yls.* Connecting rods *Yls.*

Crank shaft *Yls.* Flywheel shaft *Yls.* Thrust shaft *Yls.* Intermediate shafts *24/5/37.* Tube shaft *Yls.*

Screw shaft *3/5/37* Propeller *28/4/37* Stern tube *28/4/37* Engine sealings *30/4/37* Engines holding down bolts *16/8/37*

Completion of fitting sea connections *13/4/37.* Completion of pumping arrangements *18/8/37* Engines tried under working conditions *18/8/37*

Crank shaft, Material *Yls.* Identification Mark *Yls.* Flywheel shaft, Material *Yls.* Identification Mark *Yls.*

Thrust shaft, Material *Yls.* Identification Mark *Yls.* Intermediate shafts, Material *Yls.* Identification Marks *Yls.*

Tube shaft, Material *Yls.* Identification Mark *Yls.* Screw shaft, Material *Yls.* Identification Mark *Yls.*

Is the flash point of the oil to be used over 150° F. *Yls.*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *Yls.*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Yls.* If so, have the requirements of the Rules been complied with *Yls.*

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *Not desired.*

Is this machinery duplicate of a previous case *Yls.* If so, state name of vessel *M/Y "ROTHLEY"*

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

This machinery, mentioned in Newcastle Rpt. No. 95287, has been efficiently fitted on board and tried under full working conditions, in accordance with the requirements of the Rules and found satisfactory. The two donkey boilers have been efficiently fitted on board and their safety valves have been adjusted under steam in accordance with the requirements of the Rules. The requirements of Section 20 of the Rules regarding the heating of oil fuel, &c. above 150° F. have been complied with. Workmanship & materials are good. The machinery is eligible, in my opinion, for the

Notation *+ L.M.C. 8-37. Oil Eng.*

The amount of Entry Fee .. £ : : When applied for, *19 AUG. 1937*
Special *1/5* .. £ *16* : *13* :
Donkey Boiler Fee .. £ : : When received, *21.8.37*
Travelling Expenses (if any) £ : : *23/8*

Committee's Minute *FRI 20 AUG 1937*

Assigned *+ Lmb. 8-37*

2 D.B. 120th

at Suf. C.L.

