

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 32769

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Date of writing Report 19 When handed in at Local Office 15 Dec 1939 Port of Sunderland
No. in Survey held at Sunderland Date, First Survey 26 July 39 Last Survey 13 Dec 1939
Reg. Book. Number of Visits 63

Single
Triple
Quadruple } Screw vessel "RODSLEY" Tons { Gross 5000
Net 3014
Built at Sunderland By whom built Wm. Leaford & Sons Ld. Yard No. 654 When built 1939
Engines made at Sunderland By whom made Wm. Leaford & Sons Ld. Engine No. 654 When made 1939
Donkey Boilers made at Stockton By whom made Stockton Chem. Engrs. & Rep. Bldg. Ld. Boiler No. 6349 When made 1939
Annan Cochran & Co (Annan) Ld. Boiler No. 14504 When made 1939
Brake Horse Power 1800 Owners Thomson Shipping Co Ld. Port belonging to twocastle
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 20 1/2 81 7/8

OIL ENGINES, &c.—Type of Engines Opposed piston airless injection 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 540 lbs/sq. in. Diameter of cylinders 520 mm. Length of stroke upper 720 mm. 880 lower 880 mm. 1200 No. of cylinders 3 No. of cranks 3 (3 strokes)
Mean Indicated Pressure 88 lbs/sq. in. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 820 mm. Is there a bearing between each crank 3 times.
Revolutions per minute 115 Flywheel dia. 1950 mm. Weight F. 49 cwt. A. 34 cwt. Means of ignition Compression Kind of fuel used Belgian gas
Crank Shaft, dia. of journals as per Rule 356 mm. as fitted 410 mm. Crank pin dia. 410 mm. Crank Webs Mid. length breadth 580 mm. Mid. length thickness 230 mm. Thickness parallel to axis 230 mm.
Flywheel Shaft, diameter as per Rule 356 mm. as fitted 410 mm. Intermediate Shafts, diameter as per Rule 286 mm. as fitted 305 mm. Thrust Shaft, diameter at collars as per Rule 300 mm. as fitted 410 mm.
Tube Shaft, diameter as per Rule J as fitted Screw Shaft, diameter as per Rule 16.4 mm. as fitted 18.0 mm. Is the screw shaft fitted with a continuous liner Yes.
Bronze Liners, thickness in way of bushes as per Rule 16.4 mm. as fitted 18.0 mm. Thickness between bushes as per Rule 12.5 mm. as fitted 14.5 mm. 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 one length.
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 no.
If two liners are fitted, is the shaft lapped or protected between the liners no. Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no. If so, state type no.

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 forced
Thickness of cylinder liners 20 mm. 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 no.
Cooling Water Pumps, No. 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. none Diameter 6" x 5 1/2" x 15" Stroke Simplex. Can one be overhauled while the other is at work no.
Pumps connected to the Main Bilge Line { No. and Size 2 6" x 5 1/2" x 15" 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 no.

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 1 main engine 80 mm x 520 mm. 1 Simplex 6" x 5 1/2" x 15"
Are two independent means arranged for circulating water through the Oil Cooler no. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4 @ 3" in E.R. 1 @ 3" Tunnel well. In Pump Room no.
In Holds, &c. N°1 3 1/2" φ rs. N°2 3 1/2" φ rs. N°3. 3" φ rs. N°4. 3 1/2" φ rs. Deep Tank 3 1/2" φ rs.
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 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 Both.
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plating Yes. Are the Overboard Discharges above or below the deep water Bilge & general service below. Ramways 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 Yes.
What pipes pass through the bunkers none. How are they protected no.
What pipes pass through the deep tanks In. bilge Suctions 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 plates
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork no.
Main Air Compressors, No. Two. No. of stages 3. Diameters 10 1/2"-8 1/2"-9 1/2" Stroke 6" Driven by Steam engine
Auxiliary Air Compressors, No. no. No. of stages no. Diameters no. Stroke no. Driven by 11 1/2" x 6" Stroke
Small Auxiliary Air Compressors, No. no. No. of stages no. Diameters no. Stroke no. Driven by no.
Scavenging Air Pumps, No. One Diameter 1510 mm. Stroke 520 mm. Driven by no.
Auxiliary Engines crank shafts, diameter as per Rule No. no. Position no.
as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* (for discharge from compressors) *Yes*.
 Can the internal surfaces of the receivers be examined and cleaned *Yes*. Is a drain fitted at the lowest part of each receiver *Yes*.

High Pressure 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. *Two* Total cubic capacity *180 cuft.* Internal diameter *3'-6"* thickness *1"*
 Seamless, lap welded or riveted longitudinal joint *Riveted* Material *M. Steel* Range of tensile strength *28/32* Working pressure by Rules *603* Actual *603*

IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*
 Is the donkey boiler intended to be used for domestic purposes only *no*.

PLANS. Are approved plans forwarded herewith for Shafting *Yes* Receivers *Yes* Separate Fuel Tanks *Yes*
 Donkey Boilers *Yes* General Pumping Arrangements *Yes* Pumping Arrangements in Machinery Space *Yes*
 Oil Fuel Burning Arrangements *Yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*.
 State the principal additional spare gear supplied *One Cast-iron Propeller, one Screw Shaft, 2 Front + 2 Back fuel Values Complete, 8 Spray Plugs, 1 Starting air Valve Complete, 1 Cyl. relief valve, 4 Scavenge pump Suction Valve 1/2 discs, 1 Fuel pump body complete, 1 upper + 1 lower piston rod + skirts, 3 main piston heads, one Set Compling bolts, one roller chain for Camshaft drive, one Cylinder Liner Complete, one Set valves for each side used in main + aux. pumps, spherical bearings complete, valve bolts + nuts for Centre + side Cam. rod top + bott. ends.*

The foregoing is a correct description, Limited.

J. H. Miller

Director Manufacturer.

Dates of Survey while building
 During progress of work in shops -- 1939. July. 26 Aug. 14, 18, 21, 22, 23, 24, 25, 28, 29, 30, 31. Sep. 1, 4, 5, 7, 8, 12, 13, 15, 19, 21, 22, 25, 26, 27, 28. Oct. 2, 3, 4, 5
 During erection on board vessel -- 10, 11, 12, 13, 16, 17, 18, 19, 20, 23, 24, 25, 26, 27, 30, 31. Nov. 2, 3, 10, 14, 15, 20, 23, 27, 28, 29. Dec. 1, 4, 5, 6, 12, 13.
 Total No. of visits *63*

Dates of Examination of principal parts—Cylinders *21/8/39, 22/8/39* Covers *✓* Pistons *5/10/39, 11/10/39* Rods *5/10/39* Connecting rods *4/10/39*
 Crank shaft (Gls.) *4/9/39* Flywheel shaft *as crank* Thrust shaft *as crank* Intermediate shafts *15/11/39, 20/11/39* Tube shaft *✓*
 Screw shaft *14/11/39* Propeller *14/11/39* Stern tube *3/10/39* Engine seatings (Tank top) *6/12/39* Engines holding down bolts *6/12/39*
 Completion of fitting sea connections *13/12/39* Completion of pumping arrangements *13/12/39* Engines tried under working conditions *13/12/39*
 Crank shaft, Material *Ingot Steel* Identification Mark *C.N. 654 J.S.C. 21.8.39* Flywheel shaft, Material *as crank* Identification Mark *✓*
 Thrust shaft, Material *as Crank* Identification Mark *as Crank* Intermediate shafts, Material *Ingot Steel* Identification Marks *Nos 493, 2939, 2940, 2941*
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Ingot Steel* Identification Mark *2942, 2943, 2944*
2945 W.N.15
15/11/39 + 20/11/39

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 *Yes*.
 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 *✓*
 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 *Yes*. If so, state name of vessel *M/V RIPLEY etc.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been built under Special Survey in accordance with the approved plans, rules of the Society & the Secretary's letter. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under working conditions alongside Quay with satisfactory results. The two donkey boilers have also been securely fixed on board, fitted to burn oil fuel (F.P. above 150° F) Section 20 of the Rules has been complied with, Safety valves of boilers adjusted under steam in accordance with the Rules.*

The machinery is eligible in my opinion to have notation: *1/2 L.M.C. 12.39 (oil Eng.) T.S (Cu) 2 DB 120 lb/s*

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

The amount of Entry Fee .. £ 5 : :
 Special £ 83 : 4 :
 Donkey Boiler Fee £ 12 : 12 :
 Travelling Expenses (if any) £ : :
 When applied for, *7 DEC 1939*
 When received, *11/1/40*

J. H. Miller
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
+ Amb. 12.39 oil Eng.
2 DB - 120 lb/s
 Assigned

