

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 32769

Received at London Office DEC 30 1939

Date of writing Report

19

When handed in at Local Office

15 Dec 1939

Port of

Sunderland

No. in Survey held at Reg. Book.

Sunderland

Date, First Survey

26 July 39

Last Survey

13 Dec 1939

Number of Visits

63

Single
Triple
Quadruple

Screw vessel

"RODSLEY"

Tons Gross 5000
Net 3014

Built at

Sunderland

By whom built

Wm. Leasford & Sons Ld.

Yard No.

654

When built

1939

Engines made at

Sunderland

By whom made

Wm. Leasford & Sons Ld.

Engine No.

654

When made

1939

Donkey Boilers made at

Stockton

By whom made

Stockton Chem. Engrs. & Reps. Ld.

Boiler No.

6349

When made

1939

Brake Horse Power

1800

Owners

Thomson Shipping Co. Ld.

Port belonging to

Twickenham

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 *460 mm.* 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 bearings*

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.* Crank pin dia. *as per Rule 410 mm.* Crank Webs *as per Rule 286 mm.* Thickness parallel to axis *230 mm.*

Flywheel Shaft, diameter *as per Rule 356 mm.* Intermediate Shafts, diameter *as per Rule 305 mm.* Thrust Shaft, diameter at collars *as per Rule 410 mm.*

Tube Shaft, diameter *as per Rule 16.4 mm.* Screw Shaft, diameter *as per Rule 12.5 mm.* Is the shaft fitted with a continuous liner *Yes.*

Bronze Liners, thickness in way of bushes *as per Rule 18.0 mm.* Thickness between bushes *as per Rule 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 *Yes.*

If two liners are fitted, is the shaft lapped or protected between the liners *Yes.* Is an approved Oil Gland or other appliance fitted at the after end of the tube *Yes.*

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 disconnected *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.*

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 *Yes.*

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 *Yes.*

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. Simplex 6" x 5 1/2" x 15"*

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" Tunnel hull.* In Pump Room *1 @ 3" in E.R. 1 @ 3" in Pump Room.*

In Holds, &c. *No. 1 3 1/2" p.r.s. No. 2 3 1/2" p.r.s. No. 3 3" p.r.s. No. 4 3 1/2" p.r.s. Deep tank 3 1/2" p.r.s.*

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 *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 *Both.*

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 *Yes.*

What pipes pass through the deep tanks *In. 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.*

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *Yes.*

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. *1.* No. of stages *1.* Diameters *11 1/2" x 6"* Stroke *6"* Driven by *Steam engine*

Small Auxiliary Air Compressors, No. *1.* No. of stages *1.* Diameters *11 1/2" x 6"* Stroke *6"* Driven by *Steam engine*

Scavenging Air Pumps, No. *One* Diameter *15 10 mm.* Stroke *520 mm.* Driven by *Steam engine*

Auxiliary Engines crank shafts, diameter *as per Rule 15 10 mm.* No. *1.* Position *Yes.*

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* (on 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 *✓*

Starting Air Receivers, No. *Two* Total cubic capacity *180 cu ft.* 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*

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 Iron & 2 Brass fuel Valves Complete, 8 Spray plugs, 1 Starting air Valve Complete, 1 Cy. relief valve, 4 Scavenge pump Inlet & Del. valve 1/2 discs, 1 Fuel pump body complete, 1 upper & 1 lower piston rod & skirt, 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, 1/2 inch bolts & nuts for Centre & side Cam. rod top & butt. Ends.*

The foregoing is a correct description, Limited.

J. H. Miller

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. 2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31. Nov. 2/3/10/11/14/15/20/23/27/28/29. 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* Rods *11/10/39* Connecting rods *4/10/39*

Crank shaft (G.L.S.) Flywheel shaft *as crank* Thrust shaft *as crank* Intermediate shafts *15/11/39, 20/1/39* Tube shaft *✓*

Screw shaft *14/11/39* Propeller *14/11/39* Stern tube *3/10/39* Engine seatings *(Bank top)* Engines holding down bolts *6/12/39*

Completion of fitting sea connections 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 *2945 W.H.F. 15/11/39 & 20/1/39*

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 *not decided*

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

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *M/V RIPLEY & Co.*

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 (Cn) 2 DB 120 lb/s

The amount of Entry Fee .. £ 5 : : When applied for, Special ... £ 83 : 4 : 27 DEC 1939

Donkey Boiler Fee ... £ 12 : 12 : When received, 11/1/40

Travelling Expenses (if any) £ : : FRI. 12 JAN 1940

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

W. H. F. L. asw.

Engineer Surveyor to Lloyd's Register of Shipping.



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