

Rpt. 4b.

10 SEP 1946

IN D.C.

## REPORT ON OIL ENGINE MACHINERY.

No. 4749

Received at London Office 30 AUG 1946

Date of writing Report 9-8-1946 When handed in at Local Office

Port of

DARTMOUTH.

No. in Survey held at  
Reg. Book.Date, First Survey 19-2-45. Last Survey 21-6-1946  
Number of Visits 13.Single  
on the Twin  
Triple  
Quadruple

Screw vessel

MATCHLOCKTons { Gross 187  
Net ✓

Built at Dartmouth By whom built Philip & Son Ltd. Yard No. 1129 When built 1946-6.  
Engines made at Loughborough By whom made Petters Ltd. Engine No. 4.PC 326 When made do.  
Donkey Boilers made at CYone By whom made ✓ Boiler No. ✓ When made ✓  
Brake Horse Power 280 Owners The Admiralty Port belonging to ✓  
Nom. Horse Power as per Rule 59 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.  
Trade for which vessel is intended Coasting.

OIL ENGINES, &c.—Type of Engines Heavy Oil. Solid Injection 2 or 4 stroke cycle 2 Single or double acting S.A.Maximum pressure in cylinders 850 lbs/sq. in. Diameter of cylinders 8 1/2" Length of stroke 13" No. of cylinders 4 No. of cranks 4Mean Indicated Pressure 100 lbs/sq. in. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 10 3/4" Is there a bearing between each crank YesRevolutions per minute 500 Flywheel dia. 34" Weight 1150 lbs. Means of ignition Compression Kind of fuel used Heavy oilCrank Shaft, { Solid forged  
Semi built  
All built } dia. of journals as per Rule as fitted 6" Crank pin dia. 5 3/4" Crank Webs Mid. length breadth 8 1/2" Mid. length thickness 2 3/4" Thickness parallel to axis ✓ Thickness around eyehole ✓Flywheel Shaft, diameter as per Rule as fitted ✓ Intermediate Shafts, diameter as per Rule as fitted 3.286 Thrust Shaft, diameter at collars as per Rule as fitted 4 3/4"Tube Shaft, diameter as per Rule as fitted ✓ Screw Shaft, diameter as per Rule as fitted 5 1/4" @ top of cone Is the { twin } screw shaft fitted with a continuous liner { No }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 thepropeller boss ✓ 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 tubeshaft Yes If so, state type Cylark Length of Bearing in Stern Bush next to and supporting propeller 22"Propeller, dia. 49" Pitch 31" No. of blades 3 Material bronze whether Movable Solid Total Developed Surface 6.8 sq. feetMethod of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubricationForced Thickness of cylinder liners ✓ Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged withnon-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 Up funnelCooling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel YesBilge Pumps worked from the Main Engines, No. One Diameter 4 3/4" Stroke 3 1/2" Can one be overhauled while the other is at work ✓Pumps connected to the Main Bilge Line { No. and Size One 2800 galls/h<sup>2</sup> } One 50 tons/h<sup>2</sup> Hamworthy Centrifugal  
How driven Main Engine Aux. EngineIs the cooling water led to the bilges Only 3/8" bore pipe from Compressor 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 The above Centrifugal Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One - no connected spareAre two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces 4 @ 2 1/2" dia In Pump Room ✓In Holds, &c. 2 @ 2 1/2" dia Fore peak & Cofferdam One each @ 2 1/2" diaIndependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 2 1/2" dia (included above)Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spacesled from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YesAre all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks YesAre 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 AboveAre 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 CYoneWhat pipes pass through the bunkers CYone How are they protected ✓What pipes pass through the deep tanks CYone 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 CYone 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. One No. of stages One Diameters 4 1/2" Stroke 4 1/2" Driven by Main EngineAuxiliary Air Compressors, No. One No. of stages 2 Diameters 4" & 1 3/4" Stroke 3" Driven by Aux EngineSmall Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by (Hand Starting)What provision is made for first Charging the Air Receivers The above Aux. Compressor Driven by Main EngineScavenging Air Pumps, No. Hooper type Blowers Diameter ✓ Stroke ✓Auxiliary Engines crank shafts, diameter as per Rule as fitted See attached reports No. ✓ Position ✓Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Yes

006666-006677-0194



## MATCHLOCK

AIR RECEIVERS:—Have they been made under survey *Yes*State No. of Report or Certificate *C. 3507/8 (Not)*Is each receiver, which can be isolated, fitted with a safety valve as per Rule *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*Injection Air Receivers, No. *None*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. *2*Total cubic capacity *22.4 cu ft.*Internal diameter *24"*thickness *3/8"*Seamless, lap welded or riveted longitudinal joint *RIVETED*Material *O.H. Steel*Range of tensile strength *26/30 1/2*Working pressure *by Rules*Actual *350/14/10*IS A DONKEY BOILER FITTED? *Yes*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 *16-2-45*

(If not, state date of approval)

Receivers *Not Rpt.*Separate Fuel Tanks *✓*Donkey Boilers *✓*General Pumping Arrangements *29-3-45*Pumping Arrangements in Machinery Space *✓*Oil Fuel Burning Arrangements *✓*

## SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes & to Admiralty Specification*State the principal additional spare gear supplied *As per Admiralty Specification.*

FOR PHILIP &amp; SON, LIMITED.

The foregoing is a correct description,

Ass<sup>t</sup> MANAGING DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *Not Rpt.*  
 During erection on board vessel -- *1945 Feb 19. May 15. JUNE 12. Sept 13 1946 Jan 11. May 14 May 14. 21. JUNE 7. 13. 14. 19. 21*  
 Total No. of visits *13.*

Dates of Examination of principal parts—Cylinders *Not Rpt. No 133* Covers *Not Rpt.* Pistons *Not Rpt.* Rods *✓* Connecting rods *Not Rpt.*  
 Crank shaft *Not Rpt.* Flywheel shaft *✓* Thrust shaft *Not Rpt.* Intermediate shafts *7-5-46* Tube shaft *✓*  
 Screw shaft *14-3-46* Propeller *14-3-46* Stern tube *14-3-46* Engine seatings *14-3-46* Engines holding down bolts *21-5-46*  
 Completion of fitting sea connections *14-3-46* Completion of pumping arrangements *19-6-46* Engines tried under working conditions *19-6-46*  
 Crank shaft, Material *Steel* Identification Mark *2622 F.H. 15-6-44* Flywheel shaft, Material *✓* Identification Mark *✓*  
 Thrust shaft, Material *Steel* Identification Mark *26 H.C. 17-8-45* Intermediate shafts, Material *Steel* Identification Marks *2516. HMD 16-1-46*  
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *2496 HMD 3-5-46*  
 Identification Marks on Air Receivers *E 4528. LLOYD'S TEST. H.T.P. 700 lbs/sq. W.P. 350 lbs/sq. H.C. 26-9-45*  
*E 4529. LLOYD'S TEST. H.T.P. 700 lbs/sq. W.P. 350 lbs/sq. H.C. 26-9-45*

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 *Yes* 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 *Yes*Is this machinery duplicate of a previous case *Yes* If so, state name of vessel

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

*The machinery of this vessel has been constructed & installed under special survey in accordance with the approved plans, the Secretary's letter, the Society's Rules & the Admiralty Specification. The workmanship & materials are good & when tried at full power at sea it was found satisfactory in every respect & eligible, in my opinion, to have the records of L.M.C. 6-46. 09 & the notation of Oil Engine 2.S.C.S.A. 4 Cy 8 1/2" x 13". 59 H.P.*

The amount of Entry Fee .. £  
 Special ... £  
 Donkey Boiler Fee ... £  
 Travelling Expenses (if any) £

When applied for, 19  
 When received, 19

Committee's Minute

Assigned + LMC 6,46 Oil Eng.  
 O.G.

FRI. 20 SEP 1946



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