

# REPORT ON OIL ENGINE MACHINERY.

No. 4 JAN 1950

Received at London Office

Date of writing Report 25-10-49 19... When handed in at Local Office... 19... Port of...  
 No. in Survey held at Northwich Date, First Survey 26th Nov/48 Last Survey 6 Oct 1949  
 Reg. Book... Number of Visits 24  
 on the Single Screw vessel M.V. "MARBURY" Tons Gross 231  
 Built at Northwich By whom built I. Pimblott & Sons Yard No. 688 When built 1949  
 Engines made at Openshaw By whom made Crossley Bros Engine No. 138624 When made 1948  
 Donkey Boilers made at None By whom made... Boiler No. ✓ When made ✓  
 Brake Horse Power 265 Owners I. C. I. Ltd Port belonging to...  
 M.N. Power as per Rule 84 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted...  
 Trade for which vessel is intended...

OIL ENGINES, &c. — Type of Engines Heavy oil 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... Ahead Firing Order in Cylinders... Span of bearings, adjacent to the crank, measured  
 from inner edge to inner edge... Is there a bearing between each crank... Report No 13505 Revolutions per minute...  
 Flywheel dia... Weight... Moment of inertia of flywheel (16lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>)... Means of ignition... Kind of fuel used...  
 Crankshaft, dia. of journals as per Rule... as fitted... Crank pin dia... Crank webs Mid. length breadth... Thickness parallel to axis...  
 Mid. length thickness... shrunk Thickness around eyehole...  
 Propeller Shaft, diameter as per Rule... as fitted... Intermediate Shafts, diameter as per Rule... as fitted... Thrust Shaft, diameter at collars as fitted... 4 3/4"  
 Main Shaft, diameter as per Rule... as fitted... Screw Shaft, diameter as per Rule... as fitted... 5 1/2"  
 Is the tube shaft fitted with a continuous liner No  
5" at top of propeller cone, 5 1/2" in body.

Propeller 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 tube shaft... Yes If so, state type Vickers "Vesta Nox" Length of bearing in Stern Bush next to and supporting propeller 21"  
 Propeller, dia. 62 1/2" Pitch 45" No. of blades 3 Material Bronze whether moveable No Total developed surface 1519 sq. feet (see over page)  
 Moment of inertia of propeller (16lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>)... Kind of damper, if fitted...  
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched... Yes Means of  
 lubrication... Thickness of cylinder liners... Are the cylinders fitted with safety valves... Yes Are the exhaust pipes and silencers water cooled  
 lagged with non-conducting material... lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
 back to the engine... Funnel Cooling Water Pumps, No. One also M.E. bilge pump + G.S. pump... 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. One Diameter 4 1/4" Stroke 3" Can one be overhauled while the other is at work... ✓  
 Pumps connected to the Main Bilge Line (No. and size One 4 1/4 x 3 (2500 gpm), One 25 ton/hr G.S. (Hamworthy))  
 How driven... M. Engine Aux engine  
 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... ✓

Oil Pumps, No. and size One 25 ton/hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size... ✓  
 Are two independent means arranged for circulating water through the Oil Cooler... ✓ Suctions, connected to both main bilge pumps and auxiliary  
 bilge pumps, No. and size:—In machinery spaces... One 2 1/2" One 2" In pump room... ✓  
 Holds, &c... 2 - 2 1/2"  
 Independent Power Pump Direct Suctions to the engine room bilges, No. and size... One 2 1/2"  
 Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes... Yes Are the bilge suction 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 Kingston 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 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... ✓  
 Do all pipes pass through the bunkers... None How are they protected...  
 Do all 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... ✓  
 On 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 two diameters... stroke... driven by Main Eng.  
 Auxiliary Air Compressors, No. One No. of stages... diameters 15 cu ft stroke... driven by Aux Eng.  
 Small Auxiliary Air Compressors, No. ✓ No. of stages... diameters... stroke... driven by...  
 What provision is made for first charging the air receivers... Hand Starting Aux Engine  
 Scavenging Air Pumps, No. One diameter... stroke... driven by Main Engine  
 Auxiliary Engines crank shafts, diameter as per Rule... as fitted... Position...  
 Have the auxiliary engines been constructed under special survey... Yes Crossley Engine Report No 139359  
 Is a report sent herewith... ✓

Mottighan  
C. 7962 - 796pt.

**AIR RECEIVERS:** —Have they been made under survey... *yes*  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule... *See Manchester Rpt.*  
 Can the internal surfaces of the receivers be examined and cleaned... *✓*  
 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, welded or riveted longitudinal joint... Material... Range of tensile strength... Working pressure...  
 Starting Air Receivers, No. *Two* Total cubic capacity... *See Manchester Report 13505.*  
 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... *Manchester*  
 (If not, state date of approval)  
 Donkey boilers... *✓* General pumping arrangements... *5.6.48* Pumping arrangements in machinery space... *5.6.48*  
 Oil fuel burning arrangements... *✓*  
 Have Torsional Vibration characteristics been approved... *✓* Date of approval...

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied... *yes*  
 State the principal additional spare gear supplied... *20221 11*

FOR ISAAC PIMBLOTT & SONS LTD.

*Isaac Pimblott*  
Managing Director.

The foregoing is a correct description,  
Manufacturer.

Dates of Survey while building  
 During progress of work in shops - -  
 During erection on board vessel - -  
 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... *2.9.48* Tube shaft... *✓*  
 Screw shaft... *2.9.48* Propeller... *21.9.48* Stern tube... *21.9.48* Engine seatings... *25.8.48* Engine holding down bolts... *15.2.48*  
 Completion of fitting sea connections... *21.9.48* Completion of pumping arrangements... *11.3.49* Engines tried under working conditions... *6.10.*

Crank shaft, material... *✓* Identification mark... *✓* Flywheel shaft, material... *✓* Identification mark... *E.19619 (25)*  
 Thrust shaft, material... *✓* Identification mark... *✓* Intermediate shafts, material... *✓* Identification marks... *2353, WAL 16.*  
 Tube shaft, material... *✓* Identification mark... *✓* Screw shaft, material... *✓* Identification mark...

Identification marks on air receivers... *EW 770 & 771.*  
 Propeller: Length *P. 60714* *24.5.48* *S. 878.* **NOTE:** Propeller size later amended to *Dia 63 3/4". Pitch 42 1/2". Sw. 10.2 1/4*  
 Welded receivers, state Makers' Name...

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*  
 Description of fire extinguishing apparatus fitted... *Portable extinguisher fitted.*  
 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... *✓*  
 Is this machinery duplicate of a previous case... *No* If so, state name of vessel... *✓*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The Machinery of this vessel has been constructed under special survey in accordance with the Society's Rules, approved plans & Secretary's letters. The material & workmanship are good. The machinery fitted on board the vessel is a satisfactory manner, basin trials & tow trials held, a new propeller fitted, machinery seen under working conditions during full power trial on River Weaver & Manchester Ship Canal. Eligible in opinion to be classed in the Register book with a notation of + LMC. 10.49. TS (06). Oil Engines.*

The amount of Entry Fee ... £ :  
 Balance Special *1/3* ... £ 11 : 4  
 Donkey Boiler Fee... £ :  
 Travelling Expenses (if any) £ 10 : 4/9  
 Committee's Minute... **LIVERPOOL**  
 Assigned... *+ LMC 10.49.0.0.*

When applied for... **22 DEC 1949**  
 When received... **19**  
**-3 JAN 1950**

*C.W. Reed*  
 Engineer, Surveyor to Lloyd's Register of Shipping  
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Certificates (if required) to be sent to the Surveyors as requested not to write on or below the space for Committee's Minute.