

REPORT ON OIL ENGINE MACHINERY.

No 122254
21 FEB 1945

Received at London Office

Date of writing Report 20-1-45 19 20-1-45 Port of Liverpool
 No. in Survey held at NORTHWICH Date, First Survey Feb 15th/44 Last Survey Jan 16th 1945
 Reg. Book. Single on the Triple Screw vessel M.V. "EMPIRE TAPLEY" A/MS 751. Tons Gross 305 Net 103
 Built at Northwich By whom built Isaac Pimblott & Sons Ltd Yard No. 662 When built 1945
 Engines made at Glasgow By whom made British Auxiliaries Ltd Engine No. 461 When made 1943
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Brake Horse Power 560 ~~460~~ Owners ✓ Port belonging to ✓
 Nom. Horse Power as per Rule 101 ✓ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended ✓

Oil ENGINES, &c.—Type of Engines Heavy oil 2 or 4 stroke cycle 2 Single or double acting Single

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 report n° 67440 Is there a bearing between each crank _____
 Revolutions per minute 310 Flywheel dia. Glasgow Weight _____ Means of ignition _____ Kind of fuel used _____
 Crank Shaft, { Solid forged _____ dia. of journals _____ as per Rule _____ as fitted _____ Crank pin dia. _____ Crank Webs _____ Mid. length breadth _____ Thickness parallel to axis _____ Kind of fuel used _____
 { Semi built _____ as per Rule _____ as fitted _____
 { All built _____ as per Rule _____ as fitted _____
 Flywheel Shaft, diameter _____ as per Rule _____ as fitted _____ Intermediate Shafts, diameter _____ as per Rule _____ as fitted _____ 113" _____ 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 _____ 7 1/16" _____ Is the 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 the propeller 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 tube _____
 Shaft Yes If so, state type Vickers Duplex Length of Bearing in Stern Bush next to and supporting propeller 2'-2" (approved)
 Propeller, dia. 68" Pitch 5 1/4" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 11 sq. feet
 Method of reversing Engines Direct ✓ Is a governor or other arrangement fitted to prevent racing of the engine ✓ Yes Means of lubrication 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 lagged 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. One 110 x 60 m/h 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 110 m/h Stroke 60 m/h Can one be overhauled while the other is at work _____
 Pumps connected to the Main Bilge Line { No. and Size 1-4100 gall/hr | 1-5x5 g.s. (23 ton/hr) | 1-Rotary 23 ton/hr
 { How driven M.E. Driven | Star. Out. Aux Eng | Star. Inn. Aux Eng
 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 1-5x5 (23 ton/hr) Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2-each 2575 gall/hr ✓
 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 3-2 1/2" In Pump Room Hand pump
 in Holds, &c. _____
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2" ✓ (also 1-2 1/2" to oily bilge) ✓
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes _____ Are the Bilge Suctions in the Machinery Spaces _____
 and 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 On Kingston Booms 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 _____
 That pipes pass through the bunkers _____ How are they protected _____
 That pipes pass through the deep tanks _____ 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 2 Diameters 140. 55 1/2" Stroke 240 1/2" Driven by Main Eng. ✓
 Auxiliary Air Compressors, No. One No. of stages 2 Diameters 4 1/2 x 17/8" Stroke 2 3/4" Driven by Port 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 Diesel engine driving aux. compressor
 Scavenging Air Pumps, No. One Diameter 720 m/h Stroke 240 1/2" Driven by Main Eng. ✓
 Auxiliary Engines crank shafts, diameter Approved (Man.) No. 60445 (Gen+Comp) No. 60430 (Cargo Pt) No. 60431 (Rating Pt) No. 60437 (Gen+GS Pt)
 as per Rule _____ as fitted _____ Part Outer _____ Part Inner _____ Star. Inn. _____ Star. Out. _____
 Have the Auxiliary Engines been constructed under special survey Yes ✓ Is a report sent herewith Yes Man. reports n° 11904 11905

Register Foundation

AIR RECEIVERS: - Have they been made under survey *Yes* State No. of Report or Certificate **C. 48328**

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 *✓*
Starting Air Receivers, No. *Two* Total cubic capacity *30 cuft* Internal diameter *21"* thickness *13/32"*
 Seamless, lap welded or riveted longitudinal joint *✓* Material *(See Gls report N: 67474)* Range of tensile strength *✓* Working pressure *Actual 355 lb*

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 *9.6.42* Receivers *16.5.33* Separate Fuel Tanks *✓*
 Donkey Boilers *✓* General Pumping Arrangements *27.8.43* Pumping Arrangements in Machinery Space *27.8.43*
 Oil Fuel Burning Arrangements *✓* *Cargo pumping 7.3.44*

SPARE GEAR.
 Has the spare gear required by the Rules been supplied *Yes*
 State the principal additional spare gear supplied *as per Specification*

The foregoing is a correct description. *✓*
 ISAAC PIMBLOTT & SONS, LTD.,
 Manufacturer. *John Pimblott*
 Managing Director

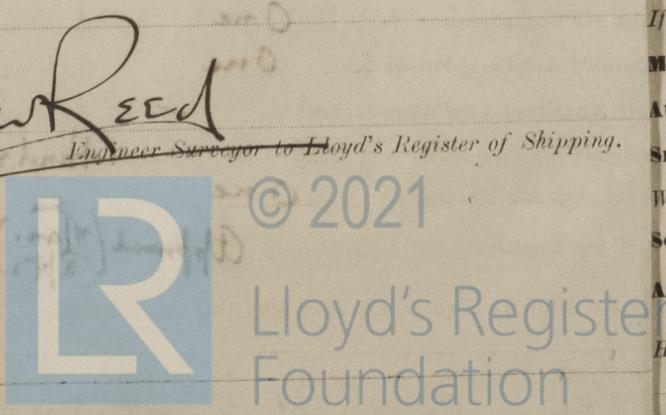
Dates of Survey while building
 During progress of work in shops - - *15/2/44 - 16/1/45*
 During erection on board vessel - - *34*
 Total No. of visits *34*

Dates of Examination of principal parts - Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
 Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *13.9.44* Tube shaft *✓*
 Screw shaft *1.8.44* Propeller *1.8.44* Stern tube *1.8.44* Engine seatings *11.8.44* Engines holding down bolts *9.10.44*
 Completion of fitting sea connections *11.8.44* Completion of pumping arrangements *28.11.44* Engines tried under working conditions *9.1.45*
 Crank shaft, Material *✓* Identification Mark *✓* Flywheel shaft, Material *✓* Identification Mark *LLOYDS 35*
 Thrust shaft, Material *✓* Identification Mark *✓* Intermediate shafts, Material *Steel* Identification Marks *J.N.B. 258*
 Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *LLOYDS 960*
 Identification Marks on Air Receivers *2 off: N: 48328*
Log test. 555 lbs. WP. 355 lb (see Gls Rpt N: 67474).
J.M.C.L. 31.3.43.

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 *6 Portable extinguishers, also deck fire line*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *Tanker* 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 Machining of this vessel has been built under special survey, and is in accordance with the approved plans and the Specification. The engines have been installed, together with the auxiliaries, and a full power basin trial carried out at Northwich with satisfactory results. The materials & workmanship are of good quality. In my opinion the machining of this vessel is eligible to be classed in the Register Book with a notation of LMC 1.45. TS. 09 -*

The amount of Entry Fee .. £ : : When applied for, *14 FEB 1945*
 Bal. Special Fee... .. £ 6 : 6 :
 Donkey Boiler Fee £ : : When received, *19*
 Travelling Expenses (if any) £ 4 : 17/6 :
 Committee's Minute *LLOYDS 10 FEB 1945*
 Assigned *+ LMC 1.45*
Oil Engines. O.G.



Certificate (if required) to be sent to
 The Surveyors are requested not to write on or below the space for Committee's Minute.
 For 55.0.15 see Surveyor's Handbook, 1944.