

Rpt. 4b.
5 SEP 1944

REPORT ON OIL ENGINE MACHINERY.

No. 52553.

30 AUG 1944

Received at London Office 1 SEP 1944

Date of writing Report 19 When handed in at Local Office 19 Port of **HULL** Date, First Survey 9.10.42 Last Survey 18.8.1944 Number of Visits 24

No. in Survey held at Reg. Book. on the Single Screw vessel **"EMPIRE LUNDY"** Tons ^{Gross} 288 _{Net} 104

Built at Knottingley By whom built John Harker Ltd. Yard No. 167 When built 1944
Engines made at Openshaw By whom made Crossley Bros. Ltd. Engine No. 131669 When made 1943
Donkey Boilers made at - By whom made - Boiler No. - When made -
Brake Horse Power 330 Owners Ministry of War Transport Port belonging to Goole
Nom. Horse Power as per Rule 116 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted Yes
Trade for which vessel is intended Coastal Tanker propelled by Oil Engines

IL ENGINES, &c.—Type of Engines Direct Injection Heavy Oil 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 850 lb/sq Diameter of cylinders 10 1/2" Length of stroke 18 1/2" No. of cylinders 6 No. of cranks 6
Mean Indicated Pressure 46 lb/sq Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 14 1/16" 14.875 Sulzer Is there a bearing between each crank Yes
Revolutions per minute 300 Flywheel dia. 37 1/2" Weight 2166 Means of ignition Compression Kind of fuel used Diesel Oil
Crank Shaft, Solid forged as per Rule approved Crank pin dia. 7 1/4" Mid. length breadth 9 1/2" Thickness parallel to axis -
Semi built dia. of journals as fitted 7 1/2" Crank Webs shrunk Mid. length thickness 2 3/12" Thickness around eye-hole -
All built Flywheel Shaft, diameter as per Rule approved Intermediate Shafts, diameter as per Rule approved Thrust Shaft, diameter at collars as per Rule approved
as fitted wank shaft coupling as fitted 4 1/2" as fitted H 3/4"

Tube Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule 4 7/8" Is the tube shaft fitted with a continuous liner No
as fitted - as fitted - Is the screw shaft fitted with a continuous liner No
Bronze Liners, thickness in way of bushes as per Rule - Thickness between bushes as per Rule - 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 VISTA Length of Bearing in Stern Bush next to and supporting propeller 2'-0"

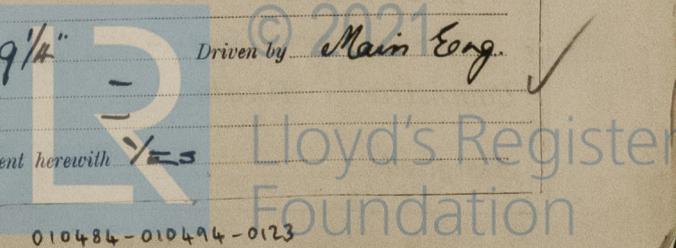
Propeller, dia. 63" Pitch 46" No. of blades 4 Material CI whether Moveable NO Total Developed Surface 12 sq. feet
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication Forced
Thickness of cylinder liners 7/8" 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 on the 4 1/4" dia. 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 Yes
Pumps connected to the Main Bilge Line { No. and Size 1-4 1/4 x 3" 1-2 1/2" Hammerly Self Priming 45 ton/hr.
How driven M.E. IND. OIL 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 Yes in cases on M.E.
Ballast Pumps, No. and size 1-2 1/2" AS ABOVE Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 13/8" x 13/4" x 2" stroke
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 2-2" 1-2 1/2" Connected to Center Pump in ER In Pump Room -

In Holds, &c. FPT 1-2" Yard Cofferdam 1-2" 1-2" Hand pump suction to Pump Room (p.s.) aft coff.
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2" one 2 1/2" emergency
Are all the Bilge Suction pipes in Holds and Tunnel Wall 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 ON ROBUST E.W. BOXES Are they fitted with Valves or Cocks COCKS
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 -

What pipes pass through the bunkers NONE How are they protected -
What 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 -
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 2 Diameters 5 3/4" & 2 1/2" Stroke 4" Driven by Main Eng.
Auxiliary Air Compressors, No. ONE No. of stages 2 Diameters SEE NOTT. RPT 10, 58177 Stroke - Driven by AN OIL ENG.
Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
What provision is made for first Charging the Air Receivers -
Scavenging Air Pumps, No. One double acting tandem Diameter 20 1/2" Stroke 9 1/4" Driven by Main Eng.
Auxiliary Engines crank shafts, diameter as per Rule - SEE NOTT. RPT 10 No. - Position -
TWO OFF as fitted C2181 C2177 Is a report sent herewith YES
Have the Auxiliary Engines been constructed under special survey YES



(Nottingham)

AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of Report or Certificate *C.1457. C.1460.*
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Safety valve on line and fusible plug in each receiver*
 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. — 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 *30 cu ft* Internal diameter *2'-0 1/8"* thickness *3/8" 4 15/32*
 Seamless, lap welded or riveted longitudinal joint *Riveted & welded* Material *S.M. steel* Range of tensile strength *26/30* Working pressure *350 lbs/sq*
Actual

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 *Yes* ✓
PLANS. Are approved plans forwarded herewith for Shafting *16.4.43* Receivers *2.7.41* Separate Fuel Tanks *7.5.43*
 (If not, state date of approval) *12.3.43* *5.12.40*
 Donkey Boilers — General Pumping Arrangements *22.9.43* Pumping Arrangements in Machinery Space *22.9.43*
 Oil Fuel Burning Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied *As per Rule Requirements*
 State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops — *8.10.43, 4.1.43, 11.2.43, 11.3.43, 17.3.43, 20.4.43* See Manchester Rpt No 11555
 During erection on board vessel — *1943 SEP 29, 1944 FEB 14, MAR 3, 8, APR 4, 11, 18, MAY 25, JUN 2, 15, 22, 28, JULY 19, 26, 31*
 Total No. of visits *6 + 18.* See Manchester Rpt. No 11555.
 Dates of Examination of principal parts—Cylinders *17.3.43* Covers *17.3.43* Pistons *17.3.43* Rods *8.10.42* Connecting rods *4.1.43*
 Crank shaft *11.3.43* Flywheel shaft — Thrust shaft *4.4.44* Intermediate shafts *21-7-43* Tube shaft —
 Screw shaft *4-4-44* Propeller *11-4-44* Stern tube *8-3.44* Engine seatings *18-4-44* Engines holding down bolts *28-6-44*
 Completion of fitting sea connections *11-4-44* Completion of pumping arrangements *21-8-44* Engines tried under working conditions *21-8-44*
 Crank shaft, Material *O.H steel* Identification Mark *LLOYDS 1743* Flywheel shaft, Material — Identification Mark —
 Thrust shaft, Material *O.H Steel* Identification Mark *LLOYDS 1726 W.T.P.E.B. 48* Intermediate shafts, Material *F.I. STL.* Identification Marks *LLOYDS 262 JNB, 21-7-43*
 Tube shaft, Material — Identification Mark — Screw shaft, Material *D2* Identification Mark *LLOYDS 259 JNB 21.7.43*
 Identification Marks on Air Receivers *E. 2838 LLOYD'S TEST 700 lbs. W.P. 350 lbs JNB. 12/5/43*
E. 2841 LLOYD'S TEST 700 lbs W.P. 350 lbs JNB. 12/5/43.

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* ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo — 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 *Yes* ✓ If so, state name of vessel *EMPIRE ALOERNEY*

General Remarks (State quality of workmanship, opinions as to class, &c.)
*The machinery of this vessel has been installed in accordance with the Rules, Specification, approved plans & Secretary's letters. The workmanship & materials are good. Eligible in my opinion to be classed *LMC 8, 44. OG Oil Eng. 250.SA. 6 cyl 10 1/2" dia x 13 1/2" STROKE 116 NHP.*

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	When applied for,
<i>Fitting out (L.M.C.)</i> special .. £	7	<i>30 AUG 1943</i>
Donkey Boiler Fee ... £	5	When received,
Travelling Expenses (if any) £	19	

TUES. 12 SEP 1944

Committee's Minute

Assigned *+LMC 8, 44 OG*

W.S. Shields
 Engineer Surveyor to Lloyd's Register of Shipping.

