

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 52553.

5 SEP 1944

30 AUG 1944

Received at London Office 1 SEP 1944

Date of writing Report

When handed in at Local Office

Port of

HULL

No. in Survey held at
Reg. Book.

Date, First Survey

8. 10. 42.

Last Survey

18. 8. 19 44

Number of Visits

24.

Tons { Gross 288
Net 104on the { Single
Triple
Quadruple } Screw vessel

"EMPIRE LUNDY"

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
managed by Kennedy, Blair & Co. of Southampton.

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

OIL 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

Is there a bearing between each crank Yes

Revolutions per minute 300

Flywheel dia. 37 1/2"

Weight 2166

Means of ignition

Kind of fuel used Diesel Oil

Crank Shaft, { Solid forged
Semi built dia. of journals
All builtas per Rule approved
as fitted 7 1/2"

Crank pin dia. 7 1/4"

Crank Webs

Mid. length breadth 9 1/2"
Mid. length thickness 2 3/16"Thickness parallel to axis -
Thickness around eye-hole -

Flywheel Shaft, diameter

as per Rule
as fittedFlywheel mounted on
Intermediate Shafts, diameteras per Rule
as fitted 4 1/2"

Thrust Shaft, diameter at collars

as per Rule approved
as fitted 4 3/4"

Tube Shaft, diameter

as per Rule
as fitted

Screw Shaft, diameter

as per Rule
as fitted 4 7/8"Is the { tube
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

VICKER'S VISTA

Length of Bearing in Stern Bush next to and supporting propeller 2'-0"

Propeller, dia.

63" pitch

46"

No. of blades 4

Material C.I.

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. Manifold water cooled pipes silicon lugs
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 on M.E. 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"

How driven M.E.

1-2 1/2" Hamworthy Self Priming 45 ton/hr. YES
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

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 Centre Pump in S.R.

In Pump Room -

In Holds, &c. FPT 1-2" -

Tight 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 Well 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. YES

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 -

Stroke -

Driven by IND. 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 -

as fitted -

SER NOTT. RPT 10

Position -

TWO OFF

Have the Auxiliary Engines been constructed under special survey YES

Is a report sent herewith YES

010484-010494-0123

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AIR RECEIVERS:—Have they been made under survey *Yes* ✓ State No. of Report or Certificate *C.145Y. 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 Actual
 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 *SM steel* Range of tensile strength *26/30* Working pressure by Rules Actual *350 lbs/sq*

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*
 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 — *8.10.42, 4.1.43, 11.2.43, 11.3.43, 14.3.43, 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, JUL 19, 26, 31*
 { Total No. of visits *6 + 18.* See Manchester Rpt. No 11555.

Dates of Examination of principal parts—Cylinders *14.3.43* Covers *14.3.43* 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 *ELK. DAT 1/2/43* Flywheel shaft, Material — Identification Mark —
 Thrust shaft, Material *O.H steel* Identification Mark *4.4.44* Intermediate shafts, Material *F.I. STL.* Identification Marks *LLOYDS 262 JNB, 21.7.43*
 Tube shaft, Material — Identification Mark — Screw shaft, Material *DR* 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 S.A. 6 c% 10 1/2" dia x 13 1/2" STROKE 116 NHP.*

The amount of Entry Fee .. £ : : When applied for,
Fitting out (L.M.C.) .. £ *5* : : *30 AUG 1943*
Special .. £ : :
Specification .. £ *7* : :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : : When received, .. 19

Committee's Minute

Assigned

TUES. 12 SEP 1944

+LMC 8.44 OG

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



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