

REPORT ON OIL ENGINE MACHINERY.

No. 51992.

Received at London Office **HULL** 5 MAY 1943

12. 3. 1943 When handed in at Local Office 19 Port of **HULL**

in Survey held at **Knittingly Gool** Date, First Survey 12. 10. 42. Last Survey 5th APRIL 1943.

Book. Number of Visits 12.

on the **Single** **Twin** **Triple** **Quadruple** Screw vessel **(MOTOR COLLIER) EMPIRE REAPER** Tons { Gross 332 Net 158

uilt at **Knittingly Gool** By whom built **John Harker Ltd.** Yard No. **146** When built **1943**

Engines made at **Manchester** By whom made **Grossley Bros Ltd.** Engine No. **124214** When made **3**

Monkey Boilers made at **—** By whom made **—** Boiler No. **—** When made **—**

ake Horse Power **275** Owners **Ministry of War Transport.** Port belonging to **—**

om. Horse Power as per Rule **97** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

ade for which vessel is intended **Motor Collier.**

NGINES, &c.—Type of Engines **Vertical Airless Injection** 2 or 4 stroke cycle **2** Single or double acting **SA**

m pressure in cylinders **800 lb** Diameter of cylinders **10 1/2"** Length of stroke **13 1/2"** No. of cylinders **5** No. of cranks **5**

icated Pressure **76 lb** Flywheel dia. **37 1/2"** Weight **2166 lb.** Means of ignition **COMPRESSION** Kind of fuel used **DIESEL OIL**

bearings, adjacent to the Crank, measured from inner edge to inner edge **14 1/2"** Is there a bearing between each crank **YES**

ons per minute **300** Crank pin dia. **7 1/4"** Crank Webs **11 305** Mid. length breadth **9 1/4"** Thickness parallel to axis **3 23/32"** Thickness around eyehole **—**

el Shaft, diameter as per Rule **—** as fitted **—** Intermediate Shafts, diameter as per Rule **—** as fitted **4 1/2"** Thrust Shaft, diameter at collars as per Rule **—** as fitted **4 3/4"**

Shaft, diameter as per Rule **—** as fitted **—** Screw Shaft, diameter as per Rule **—** as fitted **5"** Is the { tube screw } shaft fitted with a continuous liner **NO**

e 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 **—**

er boss **✓** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **✓**

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 **✓**

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 **—**

YES If so, state type **NEWARK** Length of Bearing in Stern Bush next to and supporting propeller **24"**

ller, dia. **5'-2"** Pitch **3'-10"** No. of blades **4** Material **C.I.** whether Moveable **NO** Total Developed Surface **9 1/2** sq. feet

od of reversing Engines **By air (direct)** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **YES** Means of lubrication **—**

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 **EX. LEO TO**

nducting material **EX. PIPE 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**

ng Water Pumps, No. **ONE ME 4 1/4" x 3"** Is the sea suction provided with an efficient strainer which can be cleared within the vessel **YES**

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.**

ps connected to the Main Bilge Line { No. and Size **ONE 4 1/4" x 3"** } How driven **M.E.** } **FOR EMERGENCY USE ONLY.** } **ONE 2" HAMWORTHY CENTRIFUGAL SELF PRIMING IND. DIESEL** } **HANDPUMP.**

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 **—**

st Pumps, No. and size **1 ME 4 1/4" x 3"** As Above Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **SEE MCHT. Rpt. 11305.**

wo independent means arranged for circulating water through the Oil Cooler **PUMP CAN BE USED.** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge **—**

ps, No. and size:—In Machinery Spaces **2- 2 1/2"** In Pump Room **✓**

olds, &c. **3- 2" IN HOLD, 1- 2" IN FP, 1- 2" IN A.P.**

pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **1- 2"**

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **YES** Are the Bilge Suctions in the Machinery Spaces **YES**

om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **YES**

all Sea Connections fitted direct on the skin of the ship **YES, OR E.W. STL. BOXES.** Are they fitted with Valves or Cocks **BOTH.**

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.**

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 **✓**

at pipes pass through the bunkers **NONE** How are they protected **✓**

at pipes pass through the deep tanks **✓** Have they been tested as per Rule **✓**

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **YES**

he 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 **YES** Is the Shaft Tunnel watertight **ENG. ROOM.** Is it fitted with a watertight door **✓** worked from **✓**

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork **✓**

in 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 **3 1/4" & 1 1/8"** Stroke **3 1/4"** Driven by **AUX. ENG.**

Small Auxiliary Air Compressors, No. **NONE** No. of stages **—** Diameters **—** Stroke **—** Driven by **—**

at provision is made for first Charging the Air Receivers **AUX. ENG. ABOVE — HAND STARTING.**

avenging Air Pumps, No. **2 (TANDEM)** Diameter **20 1/2"** Stroke **7 3/4"** Driven by **MAIN ENG.**

Auxiliary Engines crank shafts, diameter as per Rule **—** as fitted **SEE MANCHESTER RPTS 11293/4/0.** No. **—** Position **—**

ve the Auxiliary Engines been constructed under special survey **YES.** Is a report sent herewith **YES.**

"EMPIRE REAPER"

AIR RECEIVERS:—Have they been made under survey **YES** State No. of Report or Certificate **NOTTINGHAM C 877.**
 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 **30 CUB. FT.** Internal diameter **2'-0 1/8"** thickness **3/8" & 1 5/32"**
 Seamless, lap welded or riveted longitudinal joint **WELDED.** Material **STEEL** Range of tensile strength **70,000** Working pressure by Rules **APP.** Actual **350 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 **7.7.42.** **8.8.42** Receivers **25.6.42.** Separate Fuel Tanks **9.7.42 & 28**
 (If not, state date of approval)
 Donkey Boilers **✓** General Pumping Arrangements **8.10.42.** Pumping Arrangements in Machinery Space **8.10.42**
 Oil Fuel Burning Arrangements **✓**

SPARE GEAR.

Has the spare gear required by the Rules been supplied **YES.**
 State the principal additional spare gear supplied

The foregoing is a correct description,

Manufacturer.

Se Manchester Report No 11305
 Dates of Survey while building { During progress of work in shops - - }
 { During erection on board vessel - - } **1942. Oct. 12, 13, 16, DEC/21, 28. JAN 29. FEB. 1, 8, 15, 22. AP. 5.**
 Total No. of visits **12**
Dates of Examination of principal parts—Cylinders **Se Manchester Report No 11305.**
 Crank shaft **15.3.43.** Flywheel shaft **✓** Thrust shaft **15.3.43.** Intermediate shafts **15.3.43** Connecting rods
 Screw shaft **12.10.42.** Propeller **13.10.42.** Stern tube **13.10.42** Engine seatings **16.10.42.** Engines holding down bolts **29.1.43**
 Completion of fitting sea connections **16.10.42.** Completion of pumping arrangements **1-3.43** Engines tried under working conditions **1-3.43, 15.**
 Crank shaft, Material Identification Mark Flywheel shaft, Material Identification Mark
 Thrust shaft, Material **Se** Identification Mark **Manchester** Intermediate shafts, Material Identification Marks
 Tube shaft, Material Identification Mark **Manchester** Screw shaft, Material Identification Mark **11305**
 Identification Marks on Air Receivers **Se Manchester Report No 11305.**

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 **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 in per approved plans, Secretary's letter and to the Specification, of good material and workmanship.
 The whole installation has been tried out under working conditions and found satisfactory in every respect.

Eligible to be classed, in our opinion, with record of *** LMC 4.43. TS OG.**
 Oil Engines **25. SA. 5 CYL. 10 1/2" - 13 1/2". 97 NHP.**

The amount of Entry Fee .. £ : : When applied for,
 Special ... £ **8 1/-** : : 19
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 19

Committee's Minute

Assigned

FRI. 21 MAY 1943

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

Lloyd's Register Foundation