

REPORT ON OIL ENGINE MACHINERY.

Received at London Office 22 DEC 1941

Date of writing Report *19* When handed in at Local Office *19* Port of **NOTTINGHAM.**

No. in Survey held at **LINCOLN.** Date, First Survey **15.7.41.** Last Survey **9.12.1941**
 Ref. Book. *Single* on the *Triple* *Quadruple* Screw vessel **PORT MADOC** Tons: Gross *113* Net *113*

Built at **LISBON.** By whom built **COMPANHIA UNIAO FABRIL.** Yard No. **113** When built **1941.**
 Engines made at **LINCOLN.** By whom made **RUSTON & HORNSBY LTD.** Engine No. **206511** When made **1941**
 Donkey Boilers made at By whom made Boiler No. When made
 Brake Horse Power **560** Owners **LOCH. FISHING CO [DIRECTOR OF NAVY CONTRACTS]** belonging to
 Nom. Horse Power as per Rule **107** Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted **YES**
 Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines **VERTICAL SOLID INJECTION. TVG BM.** or 4 stroke cycle **4** Single or double acting **SINGLE.**

Maximum pressure in cylinders **675 LB.** Diameter of cylinders **12 1/2"** Length of stroke **15"** No. of cylinders **7.** No. of cranks **7.**
 Mean Indicated Pressure **100.5 LB.** Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **13 13/16"** Is there a bearing between each crank **YES.**
 Revolutions per minute **430** Flywheel dia. **51"** Weight **37 cwt.** Means of ignition **COMPRESSION** Kind of fuel used **HEAVY OIL.**
 Crank Shaft, Solid forged dia. of journals *as per Rule APPD 4.8.39.* **9"** Crank pin dia. **7"** Crank Webs *Mid. length breadth 12"* *Mid. length thickness 3 15/16"* Thickness parallel to axis Thickness around eyehole

Flywheel Shaft, diameter *as per Rule* *as fitted* Intermediate Shafts, diameter *as per Rule APPD 7.2.41* *as fitted* **6 1/8"** Thrust Shaft, diameter at collars *as per Rule* *as fitted*

Tube Shaft, diameter *as per Rule* *as fitted* Screw Shaft, diameter *as per Rule APPD 7.2.41* *as fitted* **7 1/8"** 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 If so, state type Length of Bearing in Stern Bush next to and supporting propeller **MANG. BRONZE** whether Movable **No.** Total Developed Surface **26** sq. feet

Propeller, dia. **8'3"** Pitch **8'-1"** No. of blades **3** Material **MANG. BRONZE** whether Movable **No.** Total Developed Surface **26** sq. feet
 Method of reversing Engines **REVERSE & REDUCTION** a governor or other arrangement fitted to prevent racing of the engine when declutched **YES** Means of lubrication **FORCED** Thickness of cylinder liners **1"** Are the cylinders fitted with safety valves **YES** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **YES** 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. **1** **PLUNGER PUMP 4 3/4 x 4 3/4** Is the sea suction provided with an efficient strainer which can be cleared within the vessel
 Bilge Pumps worked from the Main Engines, No. **1** Diameter **4 3/4"** Stroke **4 3/4"** Can one be overhauled while the other is at work
 Pumps connected to the Main Bilge Line: No. and Size **1-2 1/2" No. 5. TRUSLOVE "CONQUEST" G.S. & BILGE PUMP - 20 TON/HR.**
 How driven **4 VROZ AUX. ENG.**
 Is the cooling water led to the bilges 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 Power Driven Lubricating Oil Pumps, including Spare Pump, **FOR ENGINE, 1 1/2" RUSTON GEAR PUMP. 1 1/2" DRYSDALE HORZ. OIL PUMP. FOR GEARS, 1 1/2" RUSTON GEAR PUMP. SPARE: 2-2" HAMNORTHY ROTOFOL PUMPS.**
 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 In Pump Room

In Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strain-boxes 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

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers How are they protected

What 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

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 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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. **1** No. of stages **1** Diameters **3"** Stroke **3 1/2"** Driven by **BELT FROM MAIN ENG.**

Small Auxiliary Air Compressors, No. **1** No. of stages **2** Diameters **3 3/4", 1 1/8"** Stroke **3 1/4"** Driven by **CLUTCH - 4VROZ, ENG.**

What provision is made for first Charging the Air Receivers **4VROZ ENG. IS HAND STARTING.**

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter *as per Rule APPD 17.5.40* *as fitted* **P. 3" J 3 5/8"** No. Position

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

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AIR RECEIVERS: — Have they been made under survey **YES** State No. of Report or Certificate **C 527, C 528** 18
 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. ✓ 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 46.8 CU. FT. Internal diameter 2'-6" thickness 3/8"
 Seamless, lap welded or riveted longitudinal joint **SEAMLESS** Material **S.M. STEEL** Range of tensile strength 26-30 Working pressure by Rules **APPD. 5.5.38** Actual **300 LB.**
IS A DONKEY BOILER FITTED? ✓ 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 {4.8.39 Receivers 5.5.38 Separate Fuel Tanks {25.2.41
 (If not, state date of approval) {7.2.41
 Donkey Boilers ✓ General Pumping Arrangements ✓ Pumping Arrangements in Machinery Space ✓
 Oil Fuel Burning Arrangements ✓

SPARE GEAR.

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

Kuston & Hornsby, Limited,

The foregoing is a correct description.

B. Lloyd
 Manufacturer.

Manufacturer.

Oil & Gas Engine Dept
 Dates of Survey while building } During progress of work in shops - - } 15.7.41 To 9.12.41 VISITS. 12.
 } During erection on board vessel - - } ✓
 } Total No. of visits } ✓

Dates of Examination of principal parts—Cylinders Covers Pistons Rods ✓ Connecting rods
 Crank shaft Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓
 Screw shaft ✓ Propeller ✓ Stern tube ✓ Engine seatings ✓ Engines holding down bolts ✓
 Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Engines tried under working conditions **SHOP TRIALS**
 Crank shaft, Material **S.M. STEEL** Identification Mark **229 25.4.41** Flywheel shaft, Material ✓ Identification Mark ✓
 Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material **S.M. STEEL** Identification Marks **6006 10.10.41**
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material **S.M. STEEL** Identification Mark **5999 10.10.41**

Identification Marks on Air Receivers **B 2826 B 2827**
LLOYD'S TEST
600 LB./SQ. IN.
WP. 300 LB./SQ. IN.
J.B. A.J. J.B. A.J.

Is the flash point of the oil to be used over 150° F. ✓
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with ✓
 Description of fire extinguishing apparatus fitted ✓
 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 **YARD No. 107.**

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This engine has been built under Special Survey in accordance with the approved plans and the Society's Rules.
 The materials and workmanship are good. Shop trials carried out at the maker's works were satisfactory.
 The engine has been despatched to Lisbon for installation in the vessel.

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

J. Buchanan
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

