

REPORT ON OIL ENGINE MACHINERY

No 16

3 OCT 1941

Received at London Office

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

No. in Survey held at **LINCOLN** Date, First Survey **1-5-41** Last Survey **2-10 1941**
 Reg. Book. Number of Visits **11**

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel **Motor Trawler "Port Jackson"** Tons: Gross
 Net

Built at **LISBON** By whom built **COMPANHIA UNIAO FABRIL** Yard No. **108** When built **1941**

Engines made at **LINCOLN** By whom made **RUSTON & HORNSBY LTD.** Engine No. **20650911** 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]** Port 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 4 VGBM** 2 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 **4** No. of cranks **4**
 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} ~~Semi built~~ ~~All built~~ dia. of journals **9"** as per Rule **APPD. 4-8-39** Crank pin dia. **7"** Crank Webs Mid. length breadth **12"** Thickness parallel to axis
 Mid. length thickness **3 15/16"** shrunk Thickness around eye-hole

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 ^{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 If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. **8'-3"** Pitch **8'-1"** No. of blades **3** Material **MANG. BRONZE** whether Moveable **NO** Total Developed Surface **26** sq. feet

Method of reversing Engines **REVERSE & REDUCTION GEAR** 14RS - 2 1/2:1 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 AUXILIARY 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

FOR ENGINE { 1 1/2" RUSTON GEAR PUMP
 1 1/2" DRYSDALE HORIZOIL PUMP
 FOR GEARS { 1 1/2" RUSTON GEAR PUMP
 1 1/2" DRYSDALE HORIZOIL PUMP
 SPARE 2 - 2" HAMWORTHY ROTOFOL PUMPS

Ballast Pumps, No. and size Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

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 strum-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 493, C 494**
 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 ✓
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, 7-2-41}** Receivers **5.5.38** Separate Fuel Tanks **{25-2-41, 29-4-41}**
 (If not, state date of approval)
 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.** ✓

The foregoing is a correct description.
J. Buchanan
HUSTON & HORNSBY LIMITED. Manufacturer.

Dates of Survey while building { During progress of work in shops - - } **1-5-41 To 2-10-41** **11 VISITS**
 { During erection on board vessel - - }
 Total No. of visits
 Dates of Examination of principal parts - Cylinders **{1-5-41, 21-8-41}** Covers **{15-41, 21-8-41}** Pistons **21-8-41** Rods ✓ Connecting rods **12-5-41, 21-8-41**
 Crank shaft **{22-8-41, 21-8-41}** 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 ✓
 Crank shaft, Material **S.M. STEEL** Identification Mark **176 JB 22/5/41** Flywheel shaft, Material ✓ Identification Mark ✓
 Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material **S.M. STEEL** Identification Marks **6004, 28/8/41 AS**
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material **S.M. STEEL** Identification Mark **5996, 28/8/41 AS**
 Identification Marks on Air Receivers **B 2816 B 2817**
LLOYD'S TEST.
600 LB. / SQ. IN.
W.P. 300 LB. / SQ. IN.
JB. 11-9-41. JB.

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.

Now charged - £20-0-0 as per letter 12/2/41
 2124/T/40/13/48-55

The amount of Entry Fee .. £ : : When applied for,
 Special £ 20 : 0 : Monthly A/c.
 Donkey Boiler Fee £ : : When received,
 Travelling Expenses (if any) .. £ : :
 19. 19.

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

Committee's Minute
 Assigned **See Lis. GE 3553**



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