

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY

No. 3571

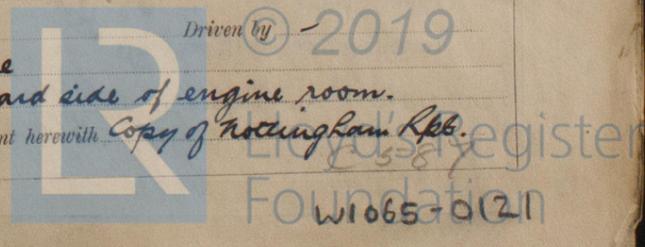
22 AUG 1942

Received at London Office

Date of writing Report 14th Aug 1942 When handed in at Local Office LISBON Port of LISBON
 No. in Survey held at LISBON Date, First Survey 4th June Last Survey 12th Aug. 1942
 Reg. Book. Number of Visits 26

on the Single Screw vessel Motor Trawler "PORT NATAL" Tons: Gross 307 Net 128
 Built at Lisbon By whom built Cia. União Fabril Yard No. 114 When built 1942
 Engines made at Lincoln By whom made Ruston + Hornsby Ltd. Engine No. 206512 When made 1942
 Donkey Boilers made at By whom made _____ Boiler No. _____ When made _____
 Brake Horse Power 560 Owners Loch Fishing Co. 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 Trawling.

OIL ENGINES, &c. Type of Engines Vertical Solid Injection 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 675 lbs. Diameter of cylinders 12 1/2" Length of stroke 15" No. of cylinders 7 No. of cranks 7
 Mean Indicated Pressure 100.5 lbs. 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 Eng. 430 Elgwheel dia. 51" Weight 37 cwt. Means of ignition comprn. Kind of fuel used Diesel oil.
 Crank Shaft, Solid forged Semi built All built dia. of journals as per Rule Appd. 4.8.39 Crank pin dia. 7" Crank Webs Mid. length breadth 12" Thickness parallel to axis
 Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule Appd. 7.2.41 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 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 Yes If so, state type newark Length of Bearing in Stern Bush next to and supporting propeller 2'-6"
 Propeller, dia. 8'-3" Pitch 8'-1" No. of blades 3 Material M. Bronze whether Moveable no Total Developed Surface 26 sq. feet
 Method of reversing Engines Reverse & Reduction Gear. Is 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 lagged 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 Yes
 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 Inverlove "Conquest" G.S. & Bilge Pump - 20 Ton/Hr.
 How driven 4 - VROZ Aux. 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 none Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size FOR ENGINE 1 1/2" Ruston Gear Pump, 1 1/2" Drysdale Storage Pump, FOR GEARS 1 1/2" Ruston Gear Pump, SPARE: 2-2" Hamworthy Coloford Pumps.
 Are two independent means arranged for circulating water through the Oil Coolers Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 1 - 2", 1 - 2 1/2", 1 - 3" In Pump Room _____
 In Holds, &c. 1 x 2" steering gear tank; 1 x 2" cofferdam; 1 x 2" Hold; 1 x 2" accom? Gal forward; 1 x 2" Chain locker; 1 x 2" F.P.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 x 3" M.E. pump 1 x 2 1/2" Aux. Eng. driven G.S. pump.
 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 Yes Are they fitted with Valves or Cocks Valves.
 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 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. 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. 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 M.E.
 Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 3 3/4", 1 1/8" Stroke 3 1/4" Driven by Clutch - Aux. eng.
 What provision is made for first Charging the Air Receivers Aux. engine is hand starting
 Scavenging Air Pumps, No. Diameter _____ Stroke _____ Driven by _____
 Auxiliary Engines crank shafts, diameter as per Rule Appd. 17.5.40 No. One
 as fitted P.-3" J.-3" Position Starboard side of engine room.
 Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith Copy of Nottingham Rbb.



AIR RECEIVERS: — Have they been made under survey *Yes* ✓ State No. of Report or Certificate *C. 581* ✓
 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. *1* Total cubic capacity *23.4 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 lbs.*

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 *9.7.41* Pumping Arrangements in Machinery Space *9.7.41*
 Oil Fuel Burning Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes, except set of spare valves for one cylinder.*
 State the principal additional spare gear supplied *To Admiralty requirements.*

COMPANHIA UNIAO FABRIL
 The foregoing is a correct description.
[Signature] Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *See Nottingham Rpt. No. 19.*
 { During erection on board vessel -- } *1942. June: 4.5.17.18.22.23.24.25.29. July: 1.4.14.15.16.18.20.22.27.28.29.30. Aug: 1.3.5.8.12.*
 Total No. of visits *26*

Dates of Examination of principal parts — Cylinders *29.7.42* Covers *29.7.42* Pistons *29.7.42* G. Pins *29.7.42* Connecting rods *29.7.42*
 Crank shaft *29.7.42* Flywheel shaft ✓ Thrust shaft *29.7.42* Intermediate shafts *29.7.42* Tube shaft ✓
 Screw shaft *17.6.42* Propeller *17.6.42* Stern tube *17.6.42* Engine sealings *15.7.42* Engines holding down bolts *15.7.42*
 Completion of fitting sea connections *17.6.42* Completion of pumping arrangements *18.7.42* Engines tried under working conditions *28.7.42*
 Crank shaft, Material *S.M. Steel* Identification Mark *216 JNB. 7.8.41* Flywheel shaft, Material ✓ Identification Mark ✓
 Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material *S.M. Steel* Identification Marks *6005 AS. 18.10.*
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material *S.M. Steel* Identification Mark *5998 AS. 11.12.*
 Identification Marks on Air Receivers *B. 2839*
LLOYDS TEST
600 1/16 sq. in.
W.P. 300 1/16 sq. in.
JNB 15.12.41

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* ✓
 Description of fire extinguishing apparatus fitted ✓
 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 *Yes* If so, state name of vessel *PORT JACKSON PORT MADOC.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above Machinery has now been satisfactorily fitted on board this vessel in accordance with the approved plans, the Secretary's letters & the Society Rules. The materials & workmanship are good. Mooring & sea trials were satisfactory. One air receiver, instead of two, fitted; see Sec. Letter 3.7.42. Arrangements have been made for the second air receiver to be fitted on the vessel's arrival at the U.K.*

The Machinery of this vessel is eligible in my opinion to be classed with Record of + LMC 8,42; TS (OG) + to have the notations "Oil Eng." "Mach. aft." in the R.B. subject to spare valves being supplied and one air receiver being fitted on arrival in the U.K.

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

Committee's Minute *FRI. 28 AUG 1942*
+ LMC 8.42 subject
Oil dip. 09.
 Assigned

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.



(The Surveyors are requested not to write on or below the space for Committee's Minute.)
 (Certificate (if required) to be sent to _____)

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