

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

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.

Single
on the ~~Fun~~
Triple
Quadruple

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 PRO. 170 Elgwheel dia. 51" Weight 37 cwt. Means of ignition comprn. Kind of fuel used Diesel oil.

Crank Shaft, Solid forged dia. of journals as per Rule Appd. 4.8.39 as fitted 9" Crank pin dia. 7" Crank Webs Mid. length breadth 12" Mid. length thickness 3 5/16" Thickness parallel to axis Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule Appd. 7.2.41 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 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 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 Inshore '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 ✓ FOR ENGINE 1 1/2" Ruston Gear Pump. 1 1/2" Drysdale Horizontal Pump.

Ballast Pumps, No. and size None Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 1/2" Drysdale Horizontal Pump.

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 flt; 1 x 2" cofferdam; 1 x 2" Hold; 1 x 2" accom? flt 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 3/4" 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 as fitted P. 3" J. 3" No. One

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 General Pumping Arrangements 9.7.41 Pumping Arrangements in Machinery Space 9.7.41
Donkey Boilers ✓ 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.
See Nottingham Rpt. No. 19.
Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - }
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 18.12.41

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 .. £
Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) ... £
When applied for, 19...
When received, 19...
Committee's Minute FRI. 28 AUG 1942
+ Lmb. 8.42 subject
Oil Eng. OG.
Assigned

G. H. M. O.
Engineer Surveyor to Lloyd's Register of Shipping.
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