

REPORT ON OIL ENGINE MACHINERY.

No 4070

Received at London Office

18 AUG 1945

Date of writing Report 31 JULY 1945 When handed in at Local Office

Port of LISBON

No. in Survey held at LISBON

Date, First Survey 26 JAN. Last Survey 30 JULY 1945

Reg. Book. Single on the Triple Screw vessel JOÃO ALVARES FAGUNDES

Number of Visits 36 Tons Gross 1270 Net 657

Built at LISBON By whom built CIA. UNIÃO FABRIL Yard No. 117 When built 1945
Engines made at HAZEL GROVE By whom made MIRRELES, BICKERTON & DAY Engine No. 5881/42 When made 1944
Donkey Boiler made at ANNAN By whom made COCHRAN & Co. Boiler No. 15754 When made 1944
Brake Horse Power 950 Owners SOC. DOS ARMADORES DE BACALHAU Port belonging to LISBON
Nom. Horse Power as per Rule 146.5 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted YES
Trade for which vessel is intended 147 FISHING PURPOSES

L ENGINES, &c.—Type of Engines AIRLESS INJECTION DIRECT REVERSED SUPERCHARGED 2 or 4 stroke cycle 4 Single or double acting SINGLE
Maximum pressure in cylinders 750 lb/a" Diameter of cylinders 13 3/4" Length of stroke 21" No. of cylinders 8 No. of cranks 8
Mean Indicated Pressure 140 lb/a" Is there a bearing between each crank YES
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 15"
Revolutions per minute 250 Flywheel dia. 4'6" Weight 1500 lb Means of ignition COMPRESSION Kind of fuel used HEAVY OIL
Crank Shaft, Solid forged dia. of journals 8 3/4" Crank pin dia. 8 3/4" Crank Webs Mid. length breadth 11 1/4" Thickness parallel to axis —
Flywheel Shaft, diameter as per Rule 6.55" Intermediate Shafts, diameter as per Rule 9 1/4" Thrust Shaft, diameter at collars as per Rule 6.9"
Tube Shaft, diameter as fitted 9 1/4" Is the tube shaft fitted with a continuous liner —
Bronze Liners, thickness in way of bushes NONE Thickness between bushes as fitted 9 1/4"
Propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —
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 —
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 —
Propeller, dia. 7'6" Pitch 4'10" No. of blades 4 Material BRONZE Whether Movable NO Total Developed Surface 24 sq. feet
Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication FORCED
Thickness of cylinder liners 3/4" MEAN 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. ONE, 4 3/4" dia. x 5 1/2" 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. ONE Diameter 4 3/4" Stroke 5 1/2" Can one be overhauled while the other is at work YES
Pumps connected to the Main Bilge Line No. and Size 1 ON MAIN ENGINE: 4 3/4" x 5 1/2" How driven 2 INDEPENDENT ELECTRICALLY DRIVEN: 45 m³ @ 25 m.
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 2 of 45 m³ @ 25 m. EACH Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 MAIN ENGINE DRIVEN 3" dia x 3 5/8" 1 ROTARY STAND BY OF 5 BHP
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 2 of 3" BORE In Pump Room —
Holds, &c. 2 of 3" BORE IN EACH HOLD, 1 P & 1 S. ALSO FROM COFFERDAM & F.P.: 3" BORE
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 of 3" BORE
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES Are the Bilge Suctions in the Machinery Spaces —
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 BILGE, BALLAST & O.F. PIPES How are they protected THROUGH W.T. TUNNEL
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 —

Main Air Compressors, No. ONE No. of stages TWO Diameters 5" & 5 5/8" Stroke 5 1/2" Driven by CRANK EXTENSION ON MAIN ENGINE
Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 4 1/2" & 2" Stroke 4 1/2" Driven by ELECTRIC MOTOR
Small Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 4 1/2" & 1 5/8" Stroke 3 1/4" Driven by AUX. DIESEL ENG.
What provision is made for first Charging the Air Receivers AUXILIARY DIESEL ENGINES ARE HAND STARTED
Scavenging Air Pumps, No. — Diameter — Stroke — Driven by —
Auxiliary Engines crank shafts, diameter as per Rule — No. TWO Position ON FLAT AT PORT SIDE OF ENGINE ROOM
Have the Auxiliary Engines been constructed under special survey YES Is a report sent herewith —

On 1803 waived as per Rule

Mass motor of 1781 & 1782 (See Mch. Estn. 2.12.44)

Hydraulic

AIR RECEIVERS: — Have they been made under survey **YES** State No. of Report or Certificate **C. 2541, 2542, 2543**

Is each receiver, which can be isolated, fitted with a safety valve as per Rule **SAFETY VALVE FITTED ON COMPRESSOR, FUSIBLE PLUG IN AIR RECEIVER**

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. **3** Total cubic capacity **- 23 cu ft each** Internal diameter **- 2'-6"** thickness **3/8"**
Seamless, lap welded or riveted longitudinal joint **SEAMLESS** Material **S.M. STEEL** Range of tensile strength — Working pressure —
by Rules — Actual —

DISHD ENDS RIVETED & WELDED CIRCUMFERENTIALLY
IS A DONKEY BOILER FITTED? **YES, N° 21631** If so, is a report now forwarded? **NO**

Is the donkey boiler intended to be used for domestic purposes only **YES**

PLANS. Are approved plans forwarded herewith for Shafting — Receivers — Separate Fuel Tanks —
(If not, state date of approval)

Donkey Boilers — General Pumping Arrangements **13 JUNE 1945** Pumping Arrangements in Machinery Space **13 JUNE 1945**

Oil Fuel Burning Arrangements — **SPARE GEAR.**

Has the spare gear required by the Rules been supplied **AS PER RULE REQUIREMENTS**

State the principal additional spare gear supplied

The foregoing is a correct description.

COMPANHIA UNIAO FABRIL
Arrendataria do
ESTALEIRO NAVAL DA A. G. T. P.
Engenharia Naval

Dates of Survey while building — During progress of work in shops — —
During erection on board vessel — —
Total No. of visits —

Dates of Examination of principal parts — Cylinders **15-3-45** Covers **15-3-45** Pistons **26-3-45** Rods — Connecting rods **26-3-45**

Crank shaft **26-1-45** Flywheel shaft **26-1-45** Thrust shaft **7-2-45** Intermediate shafts **14-2-45** Tube shaft —

Screw shaft **29-1-45** Propeller **5-5-45** Stern tube **29-1-45** Engine seatings **26-1-45** Engines holding down bolts **1-6-45**

Completion of fitting sea connections **15-3-45** Completion of pumping arrangements **16-7-45** Engines tried under working conditions **26-7-45**

Crank shaft, Material **O.H. STEEL** Identification Mark **13-1-44** Flywheel shaft, Material — Identification Mark —

Thrust shaft, Material **O.H. STEEL** Identification Mark **17-10-44** Intermediate shafts, Material **O.H. STEEL** Identification Marks **LLOYDS 76, J.N.B. 13-9-4, LLOYDS 771, J.N.B. 13-9-4**

Tube shaft, Material — Identification Mark — Screw shaft, Material **O.H. STEEL** Identification Mark **J.N.B. 13-9-4**

Identification Marks on Air Receivers **B.3089** **B.3090** **B.3091**
LLOYDS TEST 600 lb **LLOYDS TEST 600 lb** **LLOYDS TEST 600 lb**
W.P. 300 lb **W.P. 300 lb** **W.P. 300 lb**
J.N.B. 12-5-44 **J.N.B. 12-5-44** **J.N.B. 12-5-44**

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 **FIRE HOSES AND 2-GALLON FOAMITE-TYPE EXTINGUISHERS**

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 **YES**

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 main and auxiliary machinery of this vessel has now been satisfactorily fitted on board in accordance with the approved plans, the Secretary's letters and the Society's Rules. The safety valves of the donkey boiler have been adjusted under steam to 90 lbs. per sq. inch, (for 105 lbs and the accumulation test carried out as per Rule.

The Machinery of this vessel is eligible in my opinion to be classed and to have the records: **+LMC 7.45, TS OG and the notations "Oil Eng." "Mach. Aft" and "DB. 105 lb"**

Note:— Upon opening out the main engine for examination after the trials, N° 8 piston crown was found to be cracked in way of the lifting hole. This piston has now been renewed.

The amount of Entry Fee **Esc: 330\$00** When applied for, **1/8 1945**

Special ... **Esc: 2000\$00** When received, **19**

Donkey Boiler Fee ... **Esc: 100\$00**

Travelling Expenses (if any) **Esc: 100\$00**

Committee's Minute **14 SEP 1945**

Assigned **+ LMC 7.45 Oil Eng.**

O.G. DB. 105 lb.

