

REPORT ON OIL ENGINE MACHINERY.

No 4070

Received at London Office

13 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. on the **Single** 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**

Revolutions per minute **250** Flywheel dia. **4'6"** Weight **1500 lb** Means of ignition **COMPRESSION** Kind of fuel used **HEAVY OIL**

Crank Shaft, 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 **6.55"** Intermediate Shafts, diameter **9 1/4"** Thrust Shaft, diameter at collars **6.9"**

Screw Shaft, diameter **7.45"** Is the tube shaft fitted with a continuous liner **-**

Bronze Liners, thickness in way of bushes **NONE** Thickness between bushes **as per Rule** Is the after end of the liner made watertight in the stern tube **-**

Propeller, dia. **7'6"** Pitch **4'10"** No. of blades **4** Material **BRONZE** Whether Moveable **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**

Thickens 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**

ENGINE DRIVEN BILGE PUMP CAN CIRCULATE C.W. SYSTEM IF REQUIRED **YES** 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.**

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 **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"**

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 **-**

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **2 OF 3" BORE** Are the Bilge Suctions in the Machinery Spaces **YES**

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **YES** Are they fitted with Valves or Cocks **VALVES**

Are all Sea Connections fitted direct on the skin of the ship **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**

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 **-**

For 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. **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.**

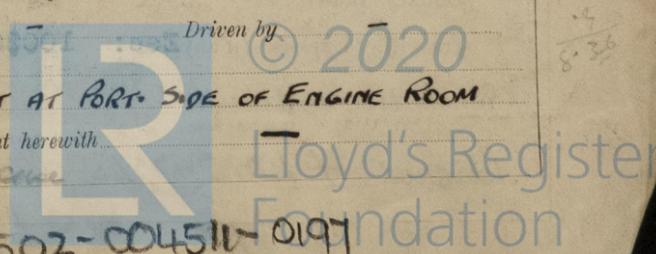
What provision is made for first Charging the Air Receivers **AUXILIARY DIESEL ENGINES ARE HAND STARTED**

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 **-**

Mass motor of 1781 of mo Dec
(See Mch. Act. 2.12.44)



004502-004511-0197

AIR RECEIVERS: - Have they been made under survey **YES** ✓ State No. of Report or Certificate **C. 2541, 2542, 2543** pt. 4b

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 - **30**

DISHED 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 (If not, state date of approval) Receivers - Separate Fuel Tanks -

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
Manufacture

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

FROM 26-1-45 to 30-7-45

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 filling 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 LLOYDS 2283 F.H. 17-10-44 Intermediate shafts, Material O.H. STEEL Identification Marks LLOYDS 764

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 LLOYDS TEST 600 lb W.P. 300 lb J.N.B. 12-5-44
B.3090 LLOYDS TEST 600 lb W.P. 300 lb J.N.B. 12-5-44
B.3091 LLOYDS TEST 600 lb W.P. 300 lb 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
SpecialEsc: 2000\$00
Donkey Boiler FeeEsc: -
Travelling Expenses (if any) Esc: 100\$00 When received, 19

Committee's Minute
Assigned + LMC 7,45 Oil Eng.
O.G. D.B. 105lb.

John G. ...
Engineer Surveyor to Lloyd's Register of Shipping.
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Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)