

# REPORT ON OIL ENGINE MACHINERY.

No. 4491

8 - MAR 1948

Received at London Office

Date of writing Report **21 Jan. 1948** when handed in at Local Office

Port of **Lisbon**

No. in Survey held at **ALFEITE**  
Reg. Book.

Date, First Survey **6 Nov. 1946** Last Survey **19 Jan. 1948**

Number of Visits **22**

**12485** on the **Single** **Triple** Screw vessel **SAMEIRO**

Tons: Gross **7.416**  
Net **4.339**

Built at **ALFEITE** By whom built **ARSENAL DO ALFEITE** Yard No. **15** When built **1948**

Engines made at **COPENHAGEN** By whom made **BURMEISTER & WAIN** Engine No. **3624** When made **1943**

Boilers made at **COPENHAGEN** By whom made **BURMEISTER & WAIN** Boiler No. **704, 705, 707** When made **1947**

Indicated Horse Power **4400** Owners **CIA. COLONIAL DE NAVEGACAO** Port belonging to **LISBON**

Net Horse Power as per Rule **1935** Is Refrigerating Machinery fitted for cargo purposes **NO** Is Electric Light fitted **YES**

Trade for which vessel is intended **CARRYING PETROLEUM IN BULK.**

Engines, &c.—Type of Engines **962 V.F. DIESEL, TRUNK PISTON, SOLID INJECT.** 2 or 4 stroke cycle **2** Single or double acting **SINGLE**

Maximum pressure in cylinders **49 Kg/cm<sup>2</sup>** Diameter of cylinders **620 mm** Length of stroke **1150 mm** No. of cylinders **9** No. of cranks **9**

Mean Indicated Pressure **6.5 Kg/cm<sup>2</sup>** Is there a bearing between each crank **YES**

Revolutions per minute **120** Flywheel dia. **4200 Kg/m<sup>2</sup>** Weights **G.D<sup>2</sup>: 11500 Kg/m<sup>2</sup>** Kind of fuel used **HEAVY OIL**

Crank shaft, dia. of journals as per Rule **415 mm** Crank pin dia. **435 mm** Mid. length breadth **1020 mm** Thickness parallel to axis **270 mm**

Intermediate Shafts, diameter as per Rule **340 mm** Thrust Shaft, diameter at collars as per Rule **357 mm**

Screw Shaft, diameter as per Rule **389.5 mm** Is the after end of the liner made watertight in the stern tube **NO**

Thickness between bushes as per Rule **—** Is the after end of the liner made watertight in the stern tube **NO**

Thickness in way of bushes as per Rule **—** Is the after end of the liner made watertight in the stern tube **NO**

Is the after end of the liner made watertight in the stern tube **NO**

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **—**

Is the space charged with a plastic material insoluble in water and non-corrosive **—**

Is an approved Oil Gland or other appliance fitted at the after end of the tube **—**

Length of Bearing in Stern Bush next to and supporting propeller **1650 mm**

Propeller, dia. **4950 mm** Pitch **3550 mm** No. of blades **4** Material **STAINLESS** whether Moveable **NO** Total Developed Surface **8.8 m<sup>2</sup>**

Method of reversing Engines **DIRECT** Is a governor or other arrangement fitted to prevent racing of the engine when detached **YES** Means of lubrication **—**

Thickness of cylinder liners **42 mm** Are the cylinders fitted with safety valves **YES** Are the exhaust pipes and silencers water cooled or lagged with conducting material **LAGGED**

Is the sea suction provided with an efficient strainer which can be cleared within the vessel **YES**

Can one be overhauled while the other is at work **YES**

No. and Size **2 OF 20 TON/HOUR EACH FROM MAIN MOTOR**

How driven **1 INDEPENDENT STEAM DUPLEX BALLAST PUMP: 9" x 12" x 12" & G.S. PUMP: 7 1/2" x 5" x 8"**

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements **—**

No. and size **1 - 9" x 12" x 12" DUPLEX Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size SPARE: 9" x 12" x 12" DUPLEX**

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size: **5 AT 3 1/2" BORE AND ONE AT 10" BORE. In Pump Room 1 AT 3 1/2"**

Are the Bilge Suctions in the Machinery Spaces from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **YES**

Are they fitted with Valves or Cocks **VALVES & COCKS**

Are the Overboard Discharges above or below the deep water line **ABOVE**

Are the Blow Off Cocks fitted with a spigot and brass covering plate **YES**

How are they protected **—**

Have they been tested as per Rule **YES**

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **YES**

Is the Shaft Tunnel watertight **—** Is it fitted with a watertight door **—** worked from **—**

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**AIR RECEIVERS:** — Have they been made under survey **YES** State No. of Report or Certificate —  
 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 14 m<sup>3</sup> Internal diameter 1830-1782 mm thickness 24 & 30 mm  
 Seamless, lap welded or riveted longitudinal joint **RIVETED** Material **S.M. STEEL** Range of tensile strength **47.5-55 Kg/mm<sup>2</sup>** Working pressure by Rules **25.5 ATM** Actual **25 ATM**

**IS A DONKEY BOILER FITTED?** **2 OIL FIRED SCOTCH EXHAUST** If so, is a report now forwarded? **NO**  
 Is the donkey boiler intended to be used for domestic purposes only **NO**  
**PLANS.** Are approved plans forwarded herewith for Shafting **12-11-45** Receivers **12-11-45** Separate Fuel Tanks **12-11-45**  
 (If not, state date of approval)  
 Donkey Boilers General Pumping Arrangements **12-11-45** Pumping Arrangements in Machinery Space **10-7-46**  
 Oil Fuel Burning Arrangements **2-9-46**

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied **YES**  
 State the principal additional spare gear supplied

The foregoing is a correct description, referring to the alterations made in General Remarks  
 Manufacturer: *Josephine Furber & Co. Ltd.*

Dates of Survey while building  
 During progress of work in shops —  
 During erection on board vessel — **FROM 6-11-46 TO 19-1-48**  
 Total No. of visits **22**  
 Dates of Examination of principal parts—Cylinders **9-12-46** Covers **9-12-46** Pistons **9-12-46** Rods **9-12-46** Connecting rods **9-12-46**  
 Crank shaft **9-12-46** Flywheel shaft — Thrust shaft **18-1-47** Intermediate shafts **18-1-47** Tube shaft —  
 Screw shaft **3-2-47** Propeller **3-2-47** Stern tube **3-2-47** Engine seatings **12-8-46** Engines holding down bolts **14-3-47**  
 Completion of filling sea connections **28-8-46** Completion of pumping arrangements **14-1-48** Engines tried under working conditions **19-1-48**  
 Crank shaft, Material **S.M. STEEL** Identification Mark **LLOYDS N° 5926-7** Flywheel shaft, Material — Identification Mark —  
 Thrust shaft, Material **S.M. STEEL** Identification Mark **LLOYDS N° 5939** Intermediate shafts, Material **S.M. STEEL** Identification Marks **CK 16-6-4**  
 Tube shaft, Material **S.M. STEEL** Identification Mark **LLOYDS N° 5937-8** Screw shaft, Material **S.M. STEEL** Identification Mark **CK 16-6-4**  
 Identification Marks on Air Receivers **LLOYDS TEST**  
**41 ATM.**  
**WP 25 ATM.**  
**4 29-7-43**

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 **STEAM SPRAYS IN BR**  
**1-20 GAL. FOAMITE MACHINE IN BR, 4-10 GAL. MACHINES IN ER, 4-2 GAL. THROUGHOUT**  
 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 **No** If so, state name of vessel —

**General Remarks** (State quality of workmanship, opinions as to class, &c. This machinery has now been satisfactorily fitted on board in accordance with the approved plans, the Secretary's letters and the Society's Rules. The materials and workmanship are good. The requirements of Sec. 20 of the Rules, where applicable, have been carried out regarding the O.F. burning arrangements, the donkey boilers. The safety valves of the 3 donkey boilers have been adjusted under shed to 180 lb. and accumulation tests on each boiler found satisfactory. The Machinery of this vessel is eligible to be classed with records of **LMC 1.48** and **TS. OG. 1.48**

The amount of Entry Fee **£ 10,500 \$ 100** When applied for,  
 Special ... .. £ : **3 Feb. 1948**  
 Donkey Boiler Fee ... .. £ :  
 Travelling Expenses (if any) £ : **4.50 1948**

Committee's Minute **FRI. 16 APR 1948**

Assigned **+ LMC 1.48 Oil Eng.**  
**O.G. E made 1943 fitted 1948**  
**3. DB 180 lb.**

**John Austin**  
 Engineer Surveyor to Lloyd's Register of Shipping  
 for self + M<sup>2</sup> Dixon  
 Lloyd's Register Foundation

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