

REPORT ON OIL ENGINE MACHINERY.

No. 4372

Received at London Office

8 DEC 1953

Writing Report JUNE 20 1953 When handed in at Local Office 19 Port of LOS ANGELES HARBOR, CALIFORNIA

Survey held at SAN PEDRO CALIFORNIA Date, First Survey JANUARY 22 53 Last Survey JUNE 12 1953
Number of Visits 50

6 on the Single Screw vessel POZA RICA Tons 7884
Triple
Quadruple Net 4459

TRIESTE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1213 When built 1938

made at TRIESTE By whom made DO Engine No. LS688 When made 1938

Boilers made at TRIESTE By whom made DO Boiler No. ✓ When made 1938

Horse Power 4000 5900 Owners PETROLEOS MEXICANOS Port belonging to TAMPICO

Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

For which vessel is intended PETROLEUM IN BULK

ENGINES, &c. Type of Engines HEAVY OIL ENGINE 2 or 4 stroke cycle Two Single or double acting SINGLE ✓

Mean pressure in cylinders 60 Kgs ✓ Diameter of cylinders 680 ✓ Length of stroke 1100 ✓ No. of cylinders 8 ✓ No. of cranks 8 PLUS ✓

Indicated Pressure 25 Kgs ✓ Ahead Firing Order in Cylinders 1.6.4.7.2.5.3.8 ✓ Span of bearings, adjacent to the crank, measured

Inner edge to inner edge 938 ✓ Is there a bearing between each cranks YES ✓ Revolutions per minute 125

Shaft dia. 236.5 ✓ Weight 14950 lbs Moment of inertia of flywheel (lbs. in² or Kg. cm.²) ✓ Means of ignition SOLID Kind of fuel used DIESEL

(Solid forged) as per Rule ✓ dia. of journals 448.47 ✓ Crank pin dia. 448.47 ✓ Crank webs Mid. length breadth TAPERED Thickness parallel to axis 216.5 ✓

(Semi built) as fitted 450 mm ✓ Mid. length thickness 290 ✓ shrunk Thickness around eye hole SOLID

(All built) as per Rule ✓ Intermediate Shafts, diameter as fitted 448.5 ✓ Thrust Shaft, diameter at collars as fitted 448.47 ✓

Shaft, diameter as per Rule ✓ as fitted 370 mm ✓ Is the tube shaft fitted with a continuous liner YES

Shaft, diameter as per Rule ✓ as fitted 390 mm ✓ Thickness in way of bushes as fitted 19.47 ✓ Thickness between bushes as fitted 18.27 ✓ Is the after end of the liner made watertight in the

liner boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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-

volatile ✓ 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

tube shaft No If so, state type ✓ Length of bearing in Stern Bush next to and supporting propeller 1.815 m ✓

Propeller, dia 4750 ✓ Pitch 3450 ✓ No. of blades FOUR Material BRONZE whether moveable No Total developed surface 5.94 sq. feet

Moment of inertia of propeller (lbs. in² or Kg. cm.²) ✓ Kind of damper, if fitted NONE

Method of reversing Engines CAMSHAFT Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of

operation FORCED Thickness of cylinder liners INSERT ✓ Are the cylinders fitted with safety valves YES ✓ Are the exhaust pipes and silencers water cooled

with non-conducting material LAGGED If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

to the engine ✓ Cooling Water Pumps, No. TWO ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES ✓

Pumps worked from the Main Engines, No. ONE ✓ Diameter 127 ✓ Stroke 152 ✓ Can one be overhauled while the other is at work ✓

connected to the Main Bilge Line { No. and size ONE X 100T, ONE X 10 TONS PH.

How driven STEAM, VERTICAL DUPLEX

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 ✓ Pumps, No. and size ONE 40 + ONE 100 TRH

Power Driven Lubricating Oil Pumps, including spare pump, No. and size TWO 360 x 245 x 500 ✓

Independent means arranged for circulating water through the Oil Cooler YES ✓ Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size:—In machinery spaces THREE X 90 ✓ TWO X 90 ✓ COFFERDAMS. ONE 38 ✓ ME DIRECT In pump room FOUR MAIN ONE X 70 ✓

bilges, &c. CARGO TANKS ONE 200 ✓ FOUR COFFERDAMS THREE X 90 ✓ DRY HOLD TWO X 50 ✓ FORE + AFT PEAKS ONE X 100 ✓ FWD DEEP TANKS TWO X 100 ✓

Independent Power Pump Direct Suctions to the engine room bilges, No. and size ONE 160 ✓ ONE 125 ✓

Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes YES ✓ Are the bilge suction pipes in the machinery spaces led from easily

removable mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES ✓

Sea Connections fitted direct on the skin of the Ship YES ✓ Are they fitted with valves or cocks VALVES AND COCKS ✓ Are they fixed

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 YES ✓

Are the pipes pass through the bunkers NONE ✓ How are they protected ✓

Are the pipes pass through the deep tanks NONE ✓ Have they been tested as per Rule ✓

Are the pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times YES ✓

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

or from one compartment to another YES ✓ Is the shaft tunnel watertight NONE ✓ Is it fitted with a watertight door ✓ worked from ✓

On a wooden vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

Air Compressors, No. TWO ✓ No. of stages TWO diameters 120 + 286 ✓ stroke 200 ✓ driven by STEAM

Auxiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓

Provision is made for first charging the air receivers RAISE STEAM DONKEY BOILERS. HAND LIGHTING GEAR AVAILABLE

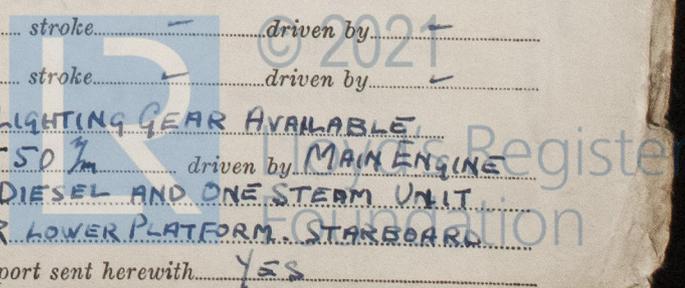
Operating Air Pumps, No. ONE ✓ diameter 1385 ✓ stroke 550 ✓ driven by MAIN ENGINE

Are the engines crank shafts, diameter as per Rule ✓ as fitted STEAM 89 ✓ DIESEL 101 ✓ No. TWO DIESEL AND ONE STEAM UNIT

Position ER LOWER PLATFORM, STARBOARD

Are the auxiliary engines been constructed under special survey STEAM RI. DIESEL USN. Is a report sent herewith YES

2900-726010-426010



AIR RECEIVERS:—Have they been made under survey. REG ITAL 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, welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure ✓

Starting Air Receivers, No. THREE ✓ Total cubic capacity ✓ Internal diameter 12 1/4 thickness SHELL 25/ HEADS 28/

Seamless, welded or riveted longitudinal joint RIVETED Material DH STEEL Range of tensile strength ✓ Working pressure Actual 35kg/

IS A DONKEY BOILER FITTED YES ✓ If so, is a report now forwarded YES ✓

Is the donkey boiler intended to be used for domestic purposes only No ✓

PLANS. Are approved plans forwarded herewith for shafting ✓ Receivers ✓ Separate fuel tanks ✓

Donkey boilers YES General pumping arrangements ✓ Pumping arrangements in machinery space ✓

Oil fuel burning arrangements ✓

Have Torsional Vibration characteristics been approved ✓ Date of approval ✓

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, ✓

Manufacturer.

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 NOV 5. 52 Covers JAN 26. 53 Pistons DEC 6. 52 Rods DEC 6. 52 Connecting rods JAN 8. 53

Crank shaft DEC 9. 52 Flywheel shaft ✓ Thrust shaft DEC 9. 52 Intermediate shafts DEC 9. 52 Tube shaft ✓

Screw shaft JAN 26. 53 Propeller JAN 26. 53 Stern tube JAN 26. 53 Engine seatings JAN 18. 53 Engine holding down bolts JAN 18. 53

Completion of fitting sea connections JAN 26. 53 Completion of pumping arrangements JAN 30. 53 Engines tried under working conditions MAY 23. 53

Crank shaft, material DH STEEL Identification mark REG ITAL GEN V4208-3 Flywheel shaft, material ✓ Identification mark ✓

Thrust shaft, material DH STEEL Identification mark REG ITAL GEN V4208A CN 5-11-37 Intermediate shafts, material DH STEEL Identification marks ✓

SEAVANGE Tube shaft, material DH STEEL Identification mark ✓ Screw shaft, material DH STEEL Identification mark REG ITAL TRIESTE 29-12-1938

Identification marks on air receivers PORT UPPER N 212. LOWER N 213 & PR 60 SAVIOLIANS 26-11-1938

STARBOARD N 211 & PR 60 SAVIOLIANS 19-11-1938

Welded receivers, state Makers' Name ✓

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 AND CHEMICAL EXTINGUISHERS

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo TANKER 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, Speed restrictions, &c. The Machinery and Donkey Boilers

of this Vessel were constructed under the Special Survey of the Surveyors to Registro

Italiano. The condition and standard of workmanship is considered to be good and

satisfactory. The Main and Auxiliary machinery examined under working conditions and

found satisfactory. The Main and Auxiliary machinery (See Rpt 9) are in good condition

The Machinery of this Vessel, is eligible in my opinion to be Classed with this Society

with a record of LMC 6.53 and is recommended for the favourable consideration

of the Committee

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

The amount of Entry Fee ... £ - : }
Special ... £ \$750 00 : } When applied for Aug 15 1953
Donkey Boiler Fee... £ - : } When received 19
Travelling Expenses (if any) £ - : }

Committee's Minute NEW YORK NOV 10 1953

Assigned LMC 6.53

A. Bloomfield
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register
Foundation