

# REPORT ON OIL ENGINE MACHINERY.

No. 10648

Received at London Office **113 FEB 1950**

Date of writing Report **Feb 19 50** When handed in at Local Office **Feb 19 50** Port of **BILBAO**

Survey held at **BILBAO** Date, First Survey **22<sup>nd</sup> Dec 1945** Last Survey **13<sup>th</sup> June 1947**  
 Number of Visits **18**

561 on the <sup>Single</sup> ~~main~~ <sup>Trip</sup> Screw vessel **"TIO PEPE"** Tons Gross **323**  
<sup>Quadriple</sup> Tons Net

Built at **Bilbao** By whom built **Ostilleros Tomas Ruiz de Ylaseca SA** Yard No. **5** When built

Engines made at **Barcelona** By whom made **Maquinista Terrestre Maritima** Engine No. **46** When made **1946**

Wankley Boilers made at  By whom made  Boiler No.  When made

Indicated Horse Power **380** Owners **Naviera Anonima Xerezana** Port belonging to **Cadix**

N. Power as per Rule **102** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **yes**

Trade for which vessel is intended **Coasting Service**

ENGINES, &c. —Type of Engines..... 2 or 4 stroke cycle..... Single or double acting.....

Maximum pressure in cylinders..... Diameter of cylinders..... Length of stroke..... No. of cylinders..... No. of cranks.....

Mean Indicated Pressure..... Ahead Firing Order..... Cylinders..... Span of bearings, adjacent to the crank, measured

from inner edge to inner edge..... Is there a bearing between each crank..... Revolutions per minute.....

Flywheel dia. **Phase, See Barcelona Report No. 5225** Moment of inertia of flywheel (16lbs.in<sup>2</sup> or Kg.cm.<sup>2</sup>)..... Means of ignition..... Kind of fuel used.....

Crank shaft <sup>Solid forged</sup> ~~Semi built~~ <sup>All built</sup> dia. of journals as per Rule..... Crank pin dia. as fitted..... Crank webs Mid. length breadth..... Thickness parallel to axis.....

Flywheel Shaft, diameter as per Rule..... Intermediate Shafts, diameter as per Rule..... Thrust Shaft, diameter at collars as fitted.....

Tube Shaft, diameter as per Rule..... Screw Shaft, diameter as per Rule..... Is the <sup>tube</sup> ~~screw~~ shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule..... Thickness between bushes as per Rule..... Is the after end of the liner made watertight in the

propeller boss **Yes**..... 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 tube shaft **No**..... If so, state type..... Length of bearing in Stern Bush next to and supporting propeller **585/2**

Propeller, dia. **1700/2** Pitch **1.03m**, No. of blades **3** Material **Cast Iron** whether moveable **No** Total developed surface **1.044** sq. **ft<sup>2</sup>**

Moment of inertia of propeller (16lbs.in<sup>2</sup> or Kg.cm.<sup>2</sup>)..... Kind of damper, if fitted.....

Method of reversing Engines **clutch running** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Means of

lubrication **Ford** Thickness of cylinder liners **20/2** 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** 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 **110/2** Stroke **64/2** Can one be overhauled while the other is at work.....

Pumps connected to the Main Bilge Line { No. and size **one 110/2 x 64/2** **one 25m<sup>3</sup>/hour** How driven **Main Engine** **Auxiliary Engine**

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 **one 25m<sup>3</sup>/hour** Power Driven Lubricating Oil Pumps, including spare pump, No. and size **one 8.2m<sup>3</sup>/hour**

Are two independent means arranged for circulating water through the Oil Cooler..... Suctions, connected to both main bilge pumps and auxiliary

bilge pumps, No. and size:—In machinery spaces **Two, 2 1/2" diam** These are direct suction **2 1/2" diam** In pump room.....

In holds, &c. **Two 2" diam**.....

Independent Power Pump Direct Suctions to the engine room bilges, No. and size.....

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes.....  Are the bilge suction 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.....

Are all Sea Connections fitted direct on the skin of the Ship.....  Are they fitted with valves or cocks **both**..... Are they fixed

sufficiently high on the ship's side to be seen without lifting the platform plates.....  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.....  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.....

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.....  Is the shaft tunnel watertight **none** 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. **one** No. of stages **one** diameters **100/2** stroke **80/2** driven by **aux engine**

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

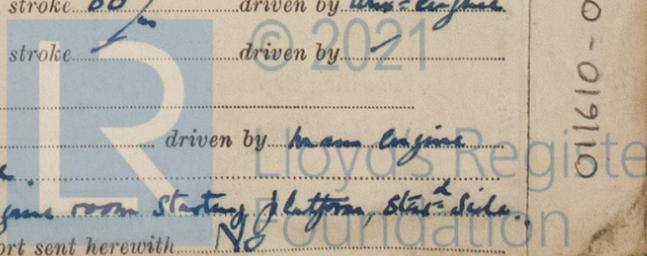
What provision is made for first charging the air receivers..... **aux engine** **hand starting**

Scavenging Air Pumps, No. **one blower** diameter..... stroke..... driven by **main engine**

Auxiliary Engines crank shafts, diameter as per Rule..... No. **one** Position **engine room** **starting platform** **starboard**

Have the auxiliary engines been constructed under special survey..... Is a report sent herewith **No**

Lloyds Register of Shipping



AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....

Can the internal surfaces of the receivers be examined and cleaned..... Is a drain fitted at the lowest part of each receiver.....

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..... Total cubic capacity..... Internal diameter..... thickness.....

Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

IS A DONKEY BOILER FITTED No 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..... 18.2.47 Receivers.....  Separate fuel tanks..... 21.4.47

Donkey boilers.....  General pumping arrangements..... 12.2.46 20.8.46 Pumping arrangements in machinery space..... 20.12.46

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved..... Yes ✓ Date of approval..... 19.2.1947

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 Manufacturer.

Dates of Survey while building: During progress of work in shops - - - - -  
During erection on board vessel - - - - - 22<sup>nd</sup> December 1945 to 13 June 1947  
Total No. of visits 18.

Dates of examination of principal parts—Cylinders.....  Covers.....  Pistons.....  Rods.....  Connecting rods.....

Crank shaft.....  Flywheel shaft.....  Thrust shaft.....  Intermediate shafts..... 28.3.47 Tube shaft.....

Screw shaft..... 21.1.47 Propeller..... 14.5.47 Stern tube..... 23.4.47 Engine seatings..... 18.4.47 Engine holding down bolts..... 21.4.47

Completion of fitting sea connections..... 24.4.47 Completion of pumping arrangements..... at Cadiz Engines tried under working conditions..... 11.6.47

Crank shaft, material.....  Identification mark.....  Flywheel shaft, material.....  Identification mark.....

Thrust shaft, material.....  Identification mark.....  Intermediate shafts, material..... OH Steel Identification marks..... No 5205

Tube shaft, material.....  Identification mark.....  Screw shaft, material..... OH Steel Identification mark..... No 3990

Identification marks on air receivers.....  21.1.47 Ad B.

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..... Chemical fire 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.....

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 Machinery of this vessel has been satisfactorily fitted under Special Survey in accordance with the Society's Rules & Regulations and Approved Plans except as stated below. A full power trial at sea was carried out with satisfactory results.

To complete the Survey the auxiliary engine requires to be examined and tested. Control gear to be fitted to oil fuel valves where required by the Rules and pumping arrangements to be examined & tested. It is understood that this has been done at Cadiz.

It is recommended that when the Survey has been completed the machinery be classed in the Register Book with the records of + LMC (with date) and TS-CI

The amount of Entry Fee ... £ :  
1/3 Special ... £ 2380 = When applied for 3/2/1950  
Donkey Boiler Fee... £ : When received 19  
Travelling Expenses (if any) £ : 74

Jos R. Zubizarain  
Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

Committee's Minute.....  
Assigned..... LMC 9.49 (with endorsement)

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