

## REPORT ON OIL ENGINE MACHINERY.

No. 1290

Received at London Office

3/3/49

Port of Cleveland, Ohio.

Feb. 25th, 1949

When handed in at Local Office

Date, First Survey Dec. 12, 1947. Last Survey March 24, 1948

Number of Visits 6

Survey held at Beloit, Wisconsin.

on the Single Twin Triple Quadruple Screw vessel

220' Portuguese Vessel

MAIN ENGINE M.V. "Coruche"

Tons { Gross -  
Net -

Built at Quebec, Canada

By whom built St. Lawrence Metals &amp; Marine Wks. Ltd.

Yard No. - When built -

Engines made at Beloit, Wis.

By whom made Fairbanks Morse &amp; Co.

Engine No. 909399 When made 1948

Monkey Boilers made at -

By whom made -

Boiler No. - When made -

Brake Horse Power 1200

Owners Portuguese Interests

Port belonging to -

Nom. Horse Power as per Rule 274

Is Refrigerating Machinery fitted for cargo purposes -

Is Electric Light fitted -

Trade for which Vessel is intended -

OIL ENGINES, &c. Type of Engines Main Propulsion Diesel, Solid 2 or 4 stroke cycle 2 Single or double acting Single  
Injection, Positive Scavenging, Trunk Piston

Maximum pressure in cylinders 900 psi

Diameter of cylinders 16"

Length of stroke 20"

No. of cylinders 6

No. of cranks 6 1 Scav.

Mean Indicated Pressure 86.4 psi

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 20.720"

Is there a bearing between each crank Yes

Revolutions per minute 300

Flywheel dia 52"

Weight 4400 lb.

Means of ignition Air Comp. Kind of fuel used Diesel OilCrank Shaft, { Solid forged  
Semi built  
All built

dia. of journals

as fitted 10"

Crank pin dia 10"

Crank Webs

Mid length breadth 13"

Thickness parallel to axis -

Mid length thickness 5.5"

Thickness around eyehole -

Flywheel Shaft, diameter

as per Rule -

as fitted 11" taper 10"

Intermediate Shafts, diameter

as per Rule -

as fitted -

Thrust Shaft, diameter at collars

as per Rule -

as fitted -

Tube Shaft, diameter

as per Rule -

as fitted -

Screw Shaft, diameter

as per Rule -

as fitted -

Is the { tube } shaft fitted with a continuous liner {

Bronze Liners, thickness in way of bushes

as per Rule -

as fitted -

Thickness between bushes

as per Rule -

as fitted -

Is the after end of the liner made watertight in the

propeller boss

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 the tube

Shaft - If so, state type -

Length of Bearing in Stern Bush next to and supporting propeller -

Propeller, dia -

Pitch -

No. of blades -

Material -

whether Moveable -

Total Developed Surface - sq. feet

Method of reversing Engines Direct AirIs a governor or other arrangement fitted to prevent racing of the engine under load Yes

Means of lubrication

Forced Thickness of cylinder liners 1.375"

at Are the cylinders fitted with safety valves Yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material -

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. (2) Centrif. 600 GPM each

the sea suction provided with an efficient strainer which can be cleared within the vessel -

Bilge Pumps worked from the Main Engines, No. None

Diameter -

Stroke -

Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line

No. and Size -

How driven -

Is the cooling water led to the bilges -

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

Ballast Pumps, No. and size - Main Engine Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size (1) Rotary. 175 GPM

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 -

In Pump Room -

In Holds, &amp;c. -

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size -

Are the Bilge Suctions in the Machinery Spaces

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes -

Are the Bilge Suctions 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 -

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 -

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 -

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. (1) Piston Type No. of Stages 2

Diameters 9.75" &amp; 8.5"

Stroke 6"

Driven by Main Engine

Auxiliary Air Compressors, No. -

No. of stages -

Diameters -

Stroke -

Driven by -

Small Auxiliary Air Compressors, No. (1) Pist. Type No. of stages 2

Diameters 2.25" &amp; 3.75"

Stroke 2.625" &amp; 3.375"

Driven by 3HP Motor

What provision is made for first Charging the Air Receivers -

Scavenging Air Pumps, No. (1) Piston Type

Diameter 37.5"

Stroke 20"

Driven by Main Engine

Auxiliary Engines crank shafts, diameter

as per Rule 8 Cyl. Journals 5.5"

Pins 3.622"

as fitted 2 Cyl. Journals 3"

Pins 2.75"

Position -

Have the Auxiliary Engines been constructed under special survey Yes

Is a report sent herewith Yes

Lloyd's Register  
Foundation

003298-003306-0020



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, lap welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure —

Starting Air Receivers, No. — Total cubic capacity — Internal diameter — thickness —

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

IS A DONKEY BOILER FITTED? — 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 <sup>Attached to</sup> Clv. Rpt. #1289 Receivers — Separate Fuel Tanks —

Donkey Boilers — General Pumping Arrangements — Pumping Arrangements in Machinery Space —

Oil Fuel Burning Arrangements —

### SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes In accordance with Rule requirements.

State the principal additional spare gear supplied See Fairbanks Morse Form No. D-3755 E 1 attached to this report.

The foregoing is a correct description

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } Dec. 12-16, 1947. Jan. 16; Feb. 18; March 23-24, 1948.  
{ During erection on board vessel - - }  
Total No. of visits 6

of Examination of principal parts—Cylinders 18.2.48 Covers 18.2.48 Pistons 18.2.48 Rods — Connecting rods 18.2.48  
shaft 18.2.48 Flywheel shaft 18.2.48 Thrust shaft — Intermediate shafts — Tube shaft —  
shaft — Propeller — Stern tube — Engine seatings — Engines holding down bolts —  
tion of fitting sea connections — Completion of pumping arrangements — Engines tried under working conditions —  
shaft, Material O.H. Forged Steel Identification Mark LLOYDS 6501 Flywheel shaft, Material O.H. Forged Steel Identification Mark LLOYDS 6501  
shaft, Material — Identification Mark — Intermediate shafts, Material — Identification Marks —  
shaft, Material — Identification Mark — Screw shaft, Material — Identification Mark —  
cation Marks on Air Receivers —

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 —

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 — If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. This main propulsion heavy oil engine was constructed under this Society's Special Survey in accordance with the Rules and approved plans. On completion the engine was brake tested at intermediate, full and overload power, ahead and astern, and found to function satisfactorily. The governing devices were tried out and found efficient. The running parts were afterwards examined and found in good condition. The materials and workmanship are of good quality throughout. Attached to this report are certified copies of the crank shaft, flywheel shaft and connecting rod physical test records, also operating test records and forging reports. For approved drawings of crank shaft and connecting rods see Clv. Rpt. #1289.

It is recommended that this vessel be assigned the record of LMC (with date) in the Register, subject to the machinery being satisfactorily installed on board and tested under working conditions.

The amount of Entry Fee ... £ 473.00 :  
2/3 Collected Cleve. ... £ 320.00 :  
Special ... £ :  
Donkey Boiler Fee ... £ :  
Clv. Travelling Expenses (if any) £ 70.00 :  
When applied for, 10/26/1948 (Clv.)  
When received, 11/26/1948 (Clv.)

Committee's Minute FRI. 10 JUN 1948

Assigned

FRI. 12 AUG 1948

Deferred See P.E. weekly rpt.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation