

REPORT ON OIL ENGINE MACHINERY.

No. 4975

0 JAN 1945

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Date of writing Report 22nd July 44 When handed in at Local Office 7th Dec 44 Port of Barcelona

No. in Survey held at Valencia Date, First Survey 19th Sept. 1942 Last Survey 1st Sept. 43

Reg. Book. m/m 8 Single m/m 032 m/m 008.0 Number of Visits 17

on the Tessa Triple Screw vessel Coaster M/V "VIRGEN DEL PILAR" Tons Gross 399.86 Net 181.77

Built at Valencia By whom built Union Naval de Levante Yard No. 41 When built 1944

Engines made at Sweden, Stockholm By whom made Atlas Diesel Polar Engine No. 85845 When made 1943

Donkey Boilers made at By whom made Boiler No. 1 When made 1

Brake Horse Power 650 Owners D. Vicente Enseñat Port belonging to Palma de Mallorca

Nom. Horse Power as per Rule 119 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended coasting service

OIL ENGINES, &c. Type of Engines Vertical heavy oil eng. Solid injection 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 34 Kgs/cm² Diameter of cylinders 250 m/m Length of stroke 420 m/m No. of cylinders 7 No. of cranks 7Mean Indicated Pressure 5.44 Kgs/cm² Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 340 m/m Is there a bearing between each crank yes

Revolutions per minute 375 Flywheel dia. 900 m/m Weight 300 Kgs Means of ignition F.O.Sol.Inj Kind of fuel used crude oil F.P.

Crank Shaft, dia. of journals as per Rule 147 m/m as fitted 170 m/m Crank pin dia. 170 m/m Crank Webs Mid. length breadth 226 m/m Thickness parallel to axis 95 m/m Thickness around eye hole Forged

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 150 m/m Thrust Shaft, diameter at collars as fitted 170 m/m

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 138 m/m Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 12 m/m as fitted 13.5 m/m Thickness between bushes as per rule 13.5 m/m Is the after end of the liner made water-tight 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 one length

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 fitted tight

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 no If so, state type Length of Bearing in Stern Bush next to and supporting propeller 620 m/m

Propeller, dia. 1600 m/m Pitch 977 m/m No. of blades 3 Material cast iron whether Moveable no Total Developed Surface 8619 mm sq. feet

Method of reversing Engines direct reverse a governor or other arrangement fitted to prevent racing of the engine when de-clutched yes Means of lubrication forced

Thickness of cylinder liners 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 to funnel

Cooling Water Pumps, No. 1 off 12 tons 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. 1 Diameter 120 m/m Stroke 60 m/m Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size 1 duplex gen. service 37 tons; 1 rotatory 10 tons; 1 bilge 12 tons How driven by electric motor by elec. motor by main 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 1 duplex 127x152 mm Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 gear pumps driven by main engine

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 2 of 60 m/m aft; 2 of 60 m/m centre forward

In Holds, &c. 1 of 60 m/m aft; 1 of 60 m/m centre; Fore peak 1 of 60 m/m; After peak 1 hand pump; Chain locker and oil well forward hold 2 hand pumps suction. independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 60 m/m general service pump

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

d 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 yes Are they fitted with Valves or Cocks yes

Are they fixed sufficiently 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

What pipes pass through the bulkheads How are they protected

What pipes pass through the deck 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 yes

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

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

In Air Compressors, No. one No. of stages 2 Diameters 70 & 125 mm Stroke 120 m/m Driven by Main Motor

Auxiliary Air Compressors, No. one No. of stages 2 Diameters 34 & 100 mm Stroke 80 m/m Driven by Aux. oil eng.

All Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Revolving Air Pumps, No. 1 of opposite pistons Diameter 650 m/m Stroke 170 m/m Driven by Main Motor

Auxiliary Engines crank shafts, diameter as per Rule 61 m/m as fitted 65 m/m

AIR RECEIVERS:—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**
High Pressure Air Receivers, No. **yes** Cubic capacity of each **175 m³** Internal diameter **150 m/m** thickness **10 m/m**
Seamless, lap welded or riveted longitudinal joint **Seamless** Material **Steel** Range of tensile strength **45 kg/cm²** Working pressure **10 kg/cm²**
Starting Air Receivers, No. **2** Total cubic capacity **0.800 m³ each** Internal diameter **550 m/m** thickness **13 m/m**
Seamless, lap welded or riveted longitudinal joint **Seamless** Material **Steel** Range of tensile strength **45 kg/cm²** Working pressure **10 kg/cm²**

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 **yes**
PLANS. Are approved plans forwarded herewith for Shafting **No. Approved See** Receivers **Made in Sweden** Separate Tanks **yes**
(If not, state date of approval) letter **31-5-43** **Lloyds No 9110 & 9111** **K. 15-11-40**
Donkey Boilers **yes** General Pumping Arrangements **No. Approved** Oil Fuel Burning Arrangements **yes**
See letter 24-7-43

SPARE GEAR.

Has the spare gear required by the Rules been supplied **Not complete. Some pieces are not yet supplied but they have been ordered by the Owners to Motor Builders.**
State the principal additional spare gear supplied **See enclosed list of spare pieces.**

The foregoing is a correct description,
[Signature]
Manufacturer.

Not build under Society's Special Survey
Dates of Survey while building: During progress of work in shops -- **1943 - March 9, 17; Ap. 6, 20; June 19, 22; July 12, 13, 15, 27, 28, 29, 30, 31; Aug. 10, 31; Sep. 1**
During erection on board vessel -- **17**
Total No. of visits **17**
Dates of Examination of principal parts—Cylinders **13-7-43** Covers **13-7-43** Pistons **13-7-43** Rods **13-7-43** Connecting rods **13-7-43**
Crank shaft **10-8-43** Flywheel shaft **10-8-43** Thrust shaft **10-8-43** Intermediate shafts **12-7-43** Tube shaft **12-7-43**
Screw shaft **17-3-43** Propeller **6-4-43** Stern tube **17-3-43** Engine seatings **19-6-43** Engines holding down bolts **29-7-43**
Completion of fitting sea connections **17-3-43** Completion of pumping arrangements **12-7-43** Engines tried under working conditions **29-7-43**
Crank shaft, Material **steel** Identification Mark **/** Flywheel shaft, Material **steel** Identification Mark **Lloyds No 1**
Thrust shaft, Material **steel** Identification Mark **/** Intermediate shafts, Material **steel** Identification Marks **F.L. 12-7-43**
Tube shaft, Material **/** Identification Mark **/** Screw shaft, Material **steel** Identification Mark **Lloyds No 108**

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**
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, etc.) **This machinery has not been constructed under Special Survey, but it complies with the Society's Rules Requirements and has been installed on board in accordance with them. Material and workmanship are good. The main and all auxiliary machinery have been tried under full working condition at sea with satisfactory results, and in my opinion the machinery is entitled to be classed in this Society with the notation of IMC 1,44.**
Subject to fuel oil transfer power pump and its deck control gear being fitted on board as soon as Owners are able to do it.

The fuel oil transfer power pump which is shown in approved plans has not been installed on board due to the fact that it has not yet been received by the owners although it was ordered in proper time. In the meantime Class is recommended as above and a hand pump of adequate capacity has been installed on board for fuel oil transfer purposes.
Forging Certificates enclosed herewith.

The amount of Entry Fee **Ptes. 360.-** When applied for, **22-7-43**
Special **250.-** When received, **19**
Donkey Boiler Fee **10**
Travelling Expenses (if any) **1116.-**

Committee's Minute **FRI. 13 JUL 1943**
Assigned **Lme 9.43 subject**
Engineer Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation