

COPY

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 4975

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Date of writing Report 22nd July 1944 When handed in at Local Office 7th Dec. 1944 Port of Barcelona

No. in Survey held at Valencia Date, First Survey 19th Sept. 1942 Last Survey 1st Sept. 1943

Reg. Book. Single on the Twin Triple Quadruple } Screw vessel Coaster M/V "VIRGEN DEL PILAR" Tons { Gross 399.66 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. / When made /

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 Mean Indicated Pressure 5.44 Kgs/cm2 Diameter of cylinders 250 mm Length of stroke 420 mm No. of cylinders 7 No. of cranks 7

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 340 mm Is there a bearing between each crank yes

Revolutions per minute 375 Flywheel dia. 900 mm Weight 300 Kgs Means of ignition F.O. Sol. Kind of fuel used crude oil F.P. above 150° F. inj.

Crank Shaft, dia. of journals as per Rule 147 mm as fitted 170 mm Crank pin dia. 170 mm Crank Webs Mid. length breadth 226 mm Mid. length thickness 95 mm Thickness parallel to axis shrunk Thickness around eye-hole forged

Flywheel Shaft, diameter as per Rule / as fitted / Intermediate Shafts, diameter as per Rule 127 mm as fitted 150 mm Thrust Shaft, diameter at collars as per Rule 134 mm as fitted 170 mm

Tube Shaft, diameter as per Rule / as fitted / Screw Shaft, diameter as per Rule 138 mm as fitted 150 mm Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 12 mm as fitted 13.5 mm Thickness between bushes as per rule 9 mm as fitted 13.5 mm 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 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 mm

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

Method of reversing Engines direct reverse Is a governor or other arrangement fitted to prevent racing of the engine when declutched 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 mm Stroke 60 mm 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 M. 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:—In Machinery Spaces 2 of 60 mm aft; 2 of 60 mm centre forward In Pump Room /

In Holds, &c. 1 of 60 mm aft; 1 of 60 mm centre. Fore peak 1 of 60 mm After peak 1 hand pump. Chain locker and oil well forward hold 2 hand pump suction.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 of 60 mm 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

and from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

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 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 yes

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 yes Is the Shaft Tunnel watertight / Is it fitted with a watertight door / worked from /

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

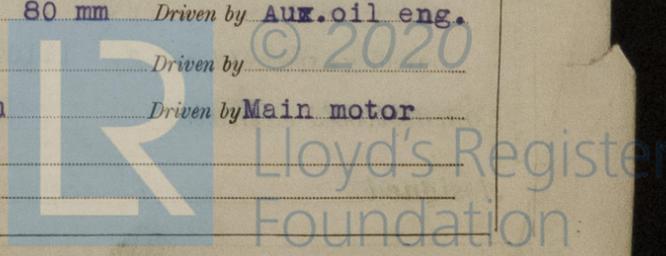
Main Air Compressors, No. one No. of stages 2 Diameters 70 & 175 mm Stroke 170 mm Driven by Main motor

Auxiliary Air Compressors, No. one No. of stages 2 Diameters 34 & 100 mm Stroke 80 mm 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 mm Stroke 170 mm Driven by Main motor

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



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. / 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. 2 Total cubic capacity 0.800 m³ each Internal diameter 550 mm thickness 13 mm
 Seamless, lap welded or riveted longitudinal joint riveted Material steel Range of tensile strength / Working pressure by Rules / Actual 25 Kgs

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 No. Approved. See letter 31-5-43 Receivers Made in Sweden Separate Tanks /
 (If not, state date of approval) Lloyds Nos. 9110 & 9111 K. 15-11-40
 Donkey Boilers / General Pumping Arrangements No. Approved. See letter 24-7-43 Oil Fuel Burning Arrangements /

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,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } Not built under Society's Special Survey.
 { During erection on board vessel - - } 1943 - March 9, 17 - Ap. 6, 20; June 19, 22; July 12, 13, 15, 27, 28, 29, 30, 31; Aug. 10, 31; Sept
 Total No. of visits 17

Dates of Examination of principal parts—Cylinders 13-7-43 Covers 13-7-43 Pistons 13-7-43 Rods / Connecting rods 13-7-43
 Crank shaft 10-8-43 Flywheel shaft / Thrust shaft 10-8-43 Intermediate shafts 12-7-43 Tube shaft /
 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 / Identification Mark /
 Thrust shaft, Material steel Identification Mark / Intermediate shafts, Material steel Identification Marks Lloyds No 1111
 Tube shaft, Material / Identification Mark / Screw shaft, Material steel Identification Mark FL 12-7-43
 Identification Mark Lloyds No 108
 Identification Mark FL 17-3-43

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
 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. This machinery has not been constructed under Special Survey, but it complied 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 LMC 1,44 Subject to fuel oil transfer power pump and its deck control gear be 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 the 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	<u>Ptas. 360.-</u>	When applied for, <u>22-7-1944</u>
Special	<u>£ 2570.-</u>	
Donkey Boiler Fee	<u>£ :</u>	When received, <u>/ 19</u>
Travelling Expenses (if any)	<u>£ 1116.-</u>	

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI, 13 JUL 1944

Assigned

See fee machy rpt.



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