

REPORT ON OIL ENGINE MACHINERY.

No. 10542

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Date of writing Report 27 March 1948 When handed in at Local Office

19

Port of

Amsterdam

Survey held at Amsterdam

Date, First Survey 13 Jan 48

Last Survey 19 March 1948

Book.

Number of Visits 13

Single
on the Twin
Triple
Quadruple
Screw vessel

Santa Mafalda

Tons { Gross.....
Net.....

at Livorno

By whom built Offero Ferni Orlando

Yard No. 1 When built 1948

Lines made at Amsterdam

By whom made H. F. Werkspoor

Engine No. 1180 When made 1948

Key Boilers made at

By whom made

Boiler No. When made

Horse Power 1100

Owners Compesa de Pesca de Aveiro

Port belonging to

Horse Power as per Rule 198

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

de for which vessel is intended

ENGINES, &c. —Type of Engines T. M. A. S. 398 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 48 kg/cm² Diameter of cylinders 390 mm Length of stroke 580 mm No. of cylinders 8 No. of cranks 8Indicated Pressure 6.8 kg/cm² of bearings, adjacent to the crank, measured from inner edge to inner edge 495 mm Is there a bearing between each crank Yes

Revolutions per minute 275 Flywheel dia. 1500 mm Weight 1240 kg Means of ignition Compression Kind of fuel used Diesel Oil

Crank pin dia. 300 mm Crank webs Mid. length breadth 500 mm Thickness parallel to axis

Solid forged dia. of journals 310 mm as per Rule 310 mm as fitted 310 mm Mid. length thickness 185 mm shrunk Thickness around eye-hole

Semi built dia. of journals 310 mm as per Rule 310 mm as fitted 310 mm Mid. length thickness 185 mm shrunk Thickness around eye-hole

All built dia. of journals 310 mm as per Rule 310 mm as fitted 310 mm Mid. length thickness 185 mm shrunk Thickness around eye-hole

Wheel Shaft, diameter as per Rule 2.00 mm Intermediate Shafts, diameter as per Rule 2.00 mm Thrust Shaft, diameter at collars as fitted 2.00 mm

Screw Shaft, diameter as per Rule 2.00 mm Is the tube screw shaft fitted with a continuous liner

Liner thickness in way of bushes as per Rule 17.5 mm Thickness between bushes as fitted 15.5 mm Is the after end of the liner made watertight in the

bell 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

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-

combustible 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 If so, state type Length of bearing in Stern Bush next to and supporting propeller 1050 mm

Propeller, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet

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

Thrust forced Thickness of cylinder liners 30 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

Lined with non-conducting material Yes 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. 1 Rotary 40 t.p.h. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps worked from the Main Engines, No. 1 Rotary 40 t.p.h. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and size How driven

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

arrangements

Fast Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 Rotary 11 t.p.h.

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

pumps, No. and size:—In machinery spaces In pump room

Holds, &c.

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

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

All Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed

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

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

Pipes pass through the bunks How are they protected

Pipes pass through the deep tanks Have they been tested as per Rule

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

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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from

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

Air Compressors, No. 1 No. of stages 1 diameters 150 mm stroke 100 mm driven by M. engine

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

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

provision is made for first charging the air receivers

Working Air Pumps, No. diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule No. Position

The auxiliary engines been constructed under special survey Is a report sent herewith

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AIR RECEIVERS:—Have they been made under survey *not yet ready*. 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 *11/10/46* Receivers *17-10-45* Separate fuel tanks
(If not, state date of approval)
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*.
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 - *1947 Jan 13-25-28-29-31 Feb 10 March 27 June 13-25-27-30 Oct 6-10*
During erection on board vessel - *Nov 3 Dec 8: 1948 Jan 5-9-19 March 15-16-19*
Total No. of visits *13*

Dates of examination of principal parts—Cylinders *9-1-48* Covers *18-2-47* Pistons *8-12-47* Rods *15-11* Connecting rods *1-12*
Crank shaft *5-1-48* Flywheel shaft *15-12-47* Thrust shaft *15-12-47* Intermediate shafts *16-3-48* Tube shaft
Screw shaft *16-3-48* Propeller *16-3-48* Stern tube *3-10-47* Engine seatings *15-3* Engine holding down bolts
Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions
Crank shaft, material *S.M. Steel* Identification mark *LLOYD'S NO 54609 J.H. 27-3-47* Flywheel shaft, material Identification mark
Thrust shaft, material *S.M. Steel* Identification mark *LLOYD'S NO 5518 J.H. 15-12-47* Intermediate shafts, material *S.M. Steel* Identification marks
Tube shaft, material Identification mark Screw shaft, material *S.M. Steel* Identification mark
Identification marks on air receivers *not yet ready*

Is the flash point of the oil to be used over 150°F.
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with
Description of fire extinguishing apparatus fitted
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 *yes* If so, state name of vessel *type 398*

General Remarks (State quality of workmanship, opinions as to class, &c. *This Engine has been built under Special Survey in accordance with approved plans and Society's Rules. Material tested as required and workmanship found good. The Engine has been tested under full load condition on makers test bench and found working satisfactory. In my opinion the vessel for which the Engine is intended will be eligible for the notation of +1HC with axle and "Strengthened for navigation in ice" when the whole machinery has been fitted satisfactory and tried under full working conditions. The Engine has been shipped to Livorno (Italy)*

The amount of Entry Fee ... £
Special ... £*848.00* When applied for *3-4-1948*
Donkey Boiler Fee... £ When received *19*
Travelling Expenses (if any) £*110.00*

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping

Lloyd's Register Foundation