

REPORT ON OIL ENGINE MACHINERY.

No. 1377

12 DEC 1949

Received at London Office

Date of writing Report 19... When handed in at Local Office 19... Port of Cleveland, Ohio

No. in Survey held at Milwaukee, Wisconsin Date, First Survey May 19 Last Survey Aug. 17, 1949
Reg. Book. M.V. "ISLAS ORCADAS" Number of Visits 10

on the Twin Screw vessel Argentine Vessel - (2) Main Propulsion Engines Tons Gross - Net -
Single Triple Quadruple

Built at Uddevalla, Sweden By whom built Uddevallavarvet Aktiebolag Yard No. 112 When built -
Engines made at Milwaukee, Wisconsin By whom made Nordberg Mfg. Co. Engine No. TSM-2973 When made 1949
TSM-2974

Donkey Boilers made at - By whom made - Boiler No. - When made -
Brake Horse Power 8500 total Owners - Port belonging to -

Nom. Horse Power as per Rule 2062 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -
Trade for which Vessel is intended -

OIL ENGINES, &c. Type of Engines Crosshead type Solid injection 2 or 4 stroke cycle 2 Single or double acting S
motor driven scavenge blowers

Maximum pressure in cylinders 800 psi Diameter of cylinders 29" Length of stroke 40" No. of cylinders 7 No. of cranks 7
Mean Indicated Pressure 80 psi

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 36.5" Is there a bearing between each crank Yes
Revolutions per minute 160 Turning Flywheel dia. 84.625" Weight 2600 lbs. Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, Solid forged 140 RPM. NTK dia. of journals as per Rule 20" Crank pin dia. 20" Crank Webs Mid length breadth 27" Thickness parallel to axis -
Semi built dia. of journals as fitted 20" Mid length thickness 9.75" sbrunk Thickness around eyehole -
All built as fitted 20" as per Rule - as per Rule -

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

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

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
as fitted - as fitted -

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
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 Rot. Camshaft Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication

Pressure Thickness of cylinder liners 1.25" Min. 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. - Is the sea suction provided with an efficient strainer which can be cleared within the vessel -
Bilge Pumps worked from the Main Engines, No. - 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 - Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size -
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 -
n Holds, &c. -

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 Suctions in the Machinery Spaces

ed 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 -

with 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 -
at 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 -

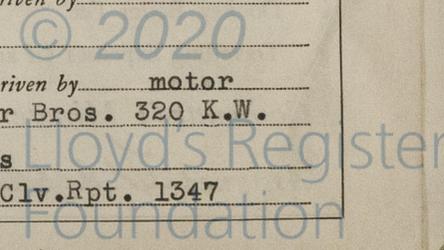
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times -
Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from

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

Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -
What provision is made for first Charging the Air Receivers -

Scavenging Air Pumps, No. Two - centrifugal Diameter 20" dia. impeller Stroke 11750 c.f.m. Driven by motor
No. Four sets Busch Sulzer Bros. 320 K.W.
Auxiliary Engines crank shafts, diameter as per Rule - Journals 7" Crankpins 6" Position Diesel Generators
as fitted Have the Auxiliary Engines been constructed under special survey Yes Is a report sent herewith N. Clv. Rpt. 1347



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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... 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 To Rule Requirements... State the principal additional spare gear supplied... See Manufacturer's list attached to Clv. Rpt. No. 1376

The foregoing is a correct description

Manufacturer.

Table with columns for Dates of Survey, Dates of Examination of principal parts, and various components like Cylinders, Crank shaft, Flywheel shaft, Thrust shaft, etc. Includes dates from May 19 to August 17, 1949.

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 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... General Remarks (State quality of workmanship, opinions as to class, &c. These two main propulsion engines have been constructed under Special Survey and to approved drawings in accordance with the Rules of this Society. The materials were tested by the Society's Surveyors with satisfactory results, and the workmanship found to be of good quality throughout. Each engine was rotated by means of the turning gear and on completion was partially dismantled and shipped to the Shipbuilder in Sweden for installation in the vessel. It is recommended that the vessel be assigned the record of *L.M.C. (with date), subject to these two engines being installed aboard the vessel and tested under working conditions, all to the satisfaction of the Society's Surveyors.

See See letter to NYK of 12/8/49 re T.V.C. (possible restricted range)

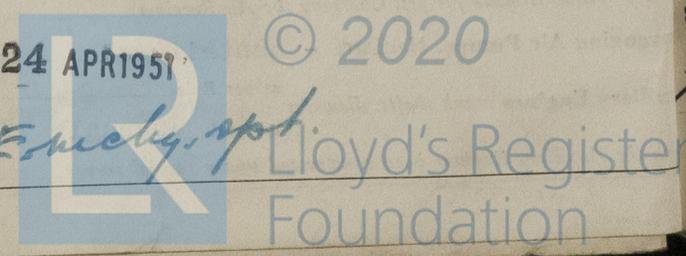
Signature: L. D. A. Johnson, R. F. Høegh, Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £\$1640.00 : When applied for, Special ... £ : : Nov. 10 1949 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) \$ 320.00 :

NEW YORK NOV 23 1949

TUES. 24 APR 1951

Committee's Minute Assigned Transmit to ...



Rpt. 5a. Date of writ... No. in Reg. Book. 90078 Built at... Engines m... Donkey Boilers m... Nominal I... MULTI... Manufact... Total H... Total for... No. and... Tested by... Area of... Area of... In case... Smallest... Smallest... Largest... If fusio... been con... long. se... Percent... Percent... Thickn... Materi... Length... Dimen... End p... How a... Tube... Mean... Gird... at ce... in ea... Tens... Pitch... From... Thick... Pitch... Mai... Dian... Scre... Dian...