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REPORT ON OIL ENGINE MACHINERY.

No. 107254

Received at London Office 20 APR 1939

Writing Report 12-4-1939 When handed in at Local Office 20 APR 1939 Port of Ipswich

Survey held at Colchester Date, First Survey 17 Oct 1938 Last Survey 4 APRIL 1939

on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel "BARIMA" Tons Gross Net

at Int. Glasgow By whom built Ferguson Bros Yard No. 340 When built 1939

engines made at Colchester By whom made Davy, Paxman & Co. (Colchester) Ltd. Engine No. 50024/5 When made 1939

Boilers made at By whom made Boiler No. When made

Horse Power 180 (360) Owners Government of British Guiana Port belonging to

Horse Power as per Rule 55 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted

Service for which vessel is intended River & Coastal Service British Guiana

ENGINES, &c. Type of Engines Heavy Oil 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 700 lb. Diameter of cylinders 6 7/8" Length of stroke 10" No. of cylinders 6 No. of cranks 6
Indicated Pressure 82 lb.

Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge 7 1/16" Is there a bearing between each crank Yes
Revolutions per minute 1000 Flywheel dia. 26" Weight 520 lb. Means of ignition Compression Kind of fuel used Kiesel

Crank Shaft, dia. of journals as per Rule 5 1/2" app. as fitted 5 1/2" Crank pin dia. 1 1/4" Crank Webs Mid. length breadth 7 1/4" Thickness parallel to axis
Mid. length thickness 2" Thickness around eye-hole

Main Shaft, diameter as per Rule 4 1/4" app. as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

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

Liner 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 stern 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

Oil Gland 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 Reverser Gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched No Means of lubrication
Thickness of cylinder liners 1/2" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with insulating material

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
Suctioning Water Pumps, No. (Cone) Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Connections 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

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Main Engine, oil each geared, 3/4" suction & del.
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

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 Suctions in the Machinery Spaces

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 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

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
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

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

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

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



AIR RECEIVERS:—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

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

Starting Air Receivers, No. *Two* Total cubic capacity *20 cubic ft.* Internal diameter *19 1/2"* thickness *3/8"*

Seamless, lap welded or riveted longitudinal joint *riveted* Material *Steel* Range of tensile strength *26/30 + 28/32* Working pressure *350*

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 *6-9-38* Receivers *8-9-38* 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

State the principal additional spare gear supplied

The foregoing is a correct description,
DAVEY, PAXMAN & CO. (Colchester) Limited,
General Manager Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *1938: Oct 17-26 Nov 4-18 Dec 6-12. 1939: Jan 2-5-12-19-26 Feb 1-20 Mar 3-20 April*
 { During erection on board vessel -- }
 Total No. of visits *16 (in shops)*

Dates of Examination of principal parts—Cylinders *26-1-39* Covers *5-7-39, 12-1-39* Pistons *26-1-39* Rods Connecting rods *26-1-39*

Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft

Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material *Steel* Identification Mark *LLOYDS 9291-2 21-10-38 GRS* Flywheel shaft, Material *Crank shaft* Identification Mark

Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks

Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark

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 *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 *Yes* If so, state name of vessel *M.V. "LADY NORTHCOTE"*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery has been constructed under Special Survey in accordance with the approved plans & Rule requirements. The materials & workmanship are sound & of good description. The engines have been tested on the Bench under full load conditions and found satisfactory and have been despatched to Port Glasgow to be fitted on board a Classed vessel.

These engines have been fitted in the vessel at Port Glasgow 25-5-39

The amount of Entry Fee .. £ : : When applied for, *20 APR 1939*
 Special *one fee* £ 30 : - :
 Donkey Boiler Fee ... £ : : When received, *21/6/39*
 Travelling Expenses (if any) £ : : *21/19*

Jaywell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 30 MAY 1939**
 Assigned **SEE ACCOMPANYING MACHINERY REPORT.**



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