

Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

REC'D NEW YORK JAN 30 1931

14 FEB 1931

No. 314

Auk 1448

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

Chicago

Last Survey

19

No. in Survey held at BELOIT, Wis.

Date, First Survey

Number of Visits

Reg. Book.

82019 on the Single Twin Triple Quadruple Screw vessel "PUKEKO"Tons { Gross 234  
Net 322Built at GOOLEBy whom built GOOLE S.B. & REPC, CO (1927) Ltd Yard No. 278 When built 1928Engines made at BELOIT, Wis U.S.A.By whom made FAIRBANKS, MORSE & CO. Engine Nos. 258331 When made 1930

Donkey Boilers made at

By whom made

Boiler No. 256391 When madeBrake Horse Power 265 HP @ 260 RPM Owners RICHARDSON & CO.Port belonging to NAPIER N.Z.Nom. Horse Power as per Rule 274 Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines DIESEL MARINE.2 or 4 stroke cycle 2 Single or double acting SINGLEMaximum pressure in cylinders 600 Diameter of cylinders 14" Length of stroke 17"

Is there a bearing between each crank

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

Revolutions per minute 250 Flywheel dia. 42" x 14" Weight 3600Means of ignition COMPRESSION Kind of fuel used DIESEL OIL.Crank Shaft, dia. of journals 8" as per Rule 8" as fitted 8" Crank pin dia. 8"Crank Webs Mid. length breadth 10 3/4" Thickness parallel to axis 3040Mid. length thickness 4 9/16" Thickness around eyeholeFlywheel Shaft, diameter as per Rule as fittedIntermediate Shafts, diameter as per Rule as fittedThrust Shaft, diameter at collars as per Rule as fitted 5-9/16Tube Shaft, diameter as per Rule as fittedScrew Shaft, diameter as per Rule as fitted

Is the { tube screw } shaft fitted with a continuous liner { }

Bronze Liners, thickness in way of bushes as per Rule as fittedThickness between bushes as per rule as fitted

Is the after end of the liner made watertight in the

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

Is an approved Oil Gland or other appliance fitted at the after end of the tube

If two liners are fitted, is the shaft lapped or protected between the liners

Length of Bearing in Stern Bush next to and supporting propeller

shaft If so, state type

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubricationFORCED FEED Thickness of cylinder liners INTEGRAL Are the cylinders fitted with safety valves NO 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. ONE EACH ENGINE - DIAL RECIP. Is the sea suction provided with an efficient strainer which can be cleared within the vesselBilge Pumps worked from the Main Engines, No. ONE EACH ENG. Diameter 2 1/4" Stroke 2 5/8" Can one be overhauled while the other is at work YESPumps connected to the Main Bilge Line { No. and Size  
How drivenLubricating Oil Pumps, including Spare Pump, No. and size TWO BUILT IN ENGINES

Ballast Pumps, No. and size

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Are two independent means arranged for circulating water through the Oil Cooler

In Pump Room

Pumps, No. and size:—In Machinery Spaces

In Holds, &amp;c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are the Bilge Suctions in the Machinery Spaces

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

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

Are they fitted with Valves or Cocks

Are all Sea Connections fitted direct on the skin of the ship

Are the Overboard Discharges above or below the deep water line

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

How are they protected

What pipes pass through the bunkers

Have they been tested as per Rule

What pipes pass through the deep tanks

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. ONE EACH ENG. No. of stages ONE Diameters 8" Stroke 6" Driven by MAIN ENGINEAuxiliary Air Compressors, No. ✓ No. of stages 0 Diameters 8" Stroke ✓ Driven by ✓Small Auxiliary Air Compressors, No. ✓ No. of stages 0 Diameters ✓ Stroke ✓ Driven by ✓Scavenging Air Pumps, No. NONE. Diameter ✓ Stroke ✓ Driven by ✓Auxiliary Engines crank shafts, diameter as per Rule as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Is a drain fitted at the lowest part of each receiver

Can the internal surfaces of the receivers be examined and cleaned

Cubic capacity of each

Internal diameter

thickness

High Pressure Air Receivers, No.

Material

Range of tensile strength

Working pressure

Seamless, lap welded or riveted longitudinal joint

Total cubic capacity

Internal diameter

thickness

Starting Air Receivers, No.

Material

Range of tensile strength

Working pressure

Seamless, lap welded or riveted longitudinal joint

012508-012513-0076

Lloyd's Register  
Foundation



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  
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

### SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

SUPPLIED AS REQUIRED BY RULES

The foregoing is a correct description,

Fairbanks Morse & Co.  
by Furstein

Manufacturer.

Dates of Survey while building  
During progress of work in shops--  
During erection on board vessel--  
Total No. of visits

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods

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 QN. STEEL Identification Mark 3760. LLOYD'S #460 98-5-27-30 Flywheel shaft, Material Identification Mark

Thrust shaft, Material Identification Mark PORT LLOYD'S #458 98-4-25-30 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.

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 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 If so, state name of vessel

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

THE ABOVE MENTIONED ENGINES PORT AND STARBOARD HAVE BEEN BUILT UNDER SPECIAL SURVEY AND IN ACCORDANCE WITH THE RULES AND APPROVED PLANS. THE MATERIAL AND WORKMANSHIP WERE FOUND TO BE SOUND AND EFFICIENT THE ENGINES ON COMPLETION WERE TESTED UNDER FULL AND INTERMEDIATE LOADS IN THE SHOP WITH SATISFACTORY RESULTS

WHEN THEY HAVE BEEN FITTED IN THE VESSEL INTENDED AND TESTED OUT TO SATISFACTION OF THE SOCIETY'S SURVEYOR SHE WILL BE ELIGIBLE IN MY OPINION FOR RECORD L.M.C. (DATE)

APPENDED HERETO ARE COPIES OF APPROVED CRANK SHAFT DRAWING & FORGING REPORT.

250 NHP @ \$1.25 312.50  
26 NHP @ .75 19.50  
The amount of Entry Fee FIRST ENTRY 20.00  
Special ... £ :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ : 78.85  
\$430.85

When applied for,

6/28 1930

When received,

7/22 1930

NEW YORK FEB 4-1931

Committee's Minute

Assigned Transmit to London

Paul H. Blain  
Engineer Surveyor to Lloyd's Register of Shipping.

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See Lloyd's Register  
FRI. 22 MAY 1931  
TUE. 12 MAY 1931  
14448