

REPORT ON OIL ENGINE MACHINERY

No. 19429

DEC -5 1938

Received at London Office

Writing Report 2nd Dec 1938 When handed in at Local Office 3rd Dec 1938 Port of Leith
 Survey held at Leith Date, First Survey 16th Sept. Last Survey 28th Nov 1938
 Number of Visits 18

49 on the Single Motor "PURIRI"
Twin Screw vessel
Triple
Quadruple
 Tons Gross 924.0
 Net 423.44
 at Leith By whom built Henry Robb Ltd Yard No. 243 When built 1938
 Engines made at Glasgow By whom made British Auxiliaries Ltd Engine No. 3078 When made 1938
 Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Horse Power 740 Owners The Anchor Shipping & Foundry Co Ltd Port belonging to Nelson N.Z.
 Horse Power as per Rule 134 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 for which vessel is intended New Zealand Coast

ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting ✓
 Maximum pressure in cylinders _____ Diameter of cylinders _____ Length of stroke _____ No. of cylinders _____ No. of cranks _____
 Indicated Pressure _____

bearings, adjacent to the Crank, measured from inner edge to inner edge _____ Is there a bearing between each crank _____
 Revolutions per minute _____ Flywheel dia. _____ Weight see gls. Rpt. No. 60064 Means of ignition _____ Kind of fuel used _____
 Shaft, dia. of journals as per Rule _____ as fitted _____ Crank Webs _____ Mid. length breadth _____ Thickness parallel to axis _____
 as per Rule _____ as fitted _____ Intermediate Shafts, diameter as per Rule Approved Thrust Shaft, diameter at collars as per Rule _____
 as fitted _____ as fitted 4 1/8" as fitted _____
 Shaft, diameter as per Rule _____ as fitted _____ Screw Shaft, diameter as per Rule Approved Is the tube shaft fitted with a continuous liner In way of stern
 as fitted _____ as fitted 5 1/8" as fitted _____ screw tube yes

Liners, thickness in way of bushes as per Rule Approved as per rule _____ Thickness between bushes as fitted _____ Is the after end of the liner made watertight in the _____
 as fitted 1/2" as fitted _____
 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 _____
 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 1'-10 7/8"

Propeller, dia. 5'-2" Pitch 3'-6" No. of blades 4 Material Bronze whether Moveable Solid Total Developed Surface 9.68 sq. feet
 Kind of reversing Engines _____ Is a governor or other arrangement fitted to prevent racing of the engine when declutched _____ Means of lubrication _____
 Thickness of cylinder liners _____ Are the cylinders fitted with safety valves _____ Are the exhaust pipes and silencers water cooled or lagged with _____
 ducting material _____ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Exhaust
 No. of Water Pumps, No. for particulars Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 Pumps worked from the Main Engines, No. 1 Each Eng. Diameter 8 5/8" Stroke 60 1/4" Can one be overhauled while the other is at work yes

connected to the Main Bilge Line } No. and Size { Gen. Service Drysdale Centric } Bilge & Ballast Drysdale Centric
 How driven { Elec. Motor. Capacity 40 tons/hr. } Elec. Motor. Capacity 40 tons/hr.
 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 _____
 Oil Pumps, No. and size 1-Drysdale Centric Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size two on each main
 independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge _____
 No. and size:—In Machinery Spaces Port for d 1-2 1/2", Port aft 1-2", Star d aft 1-2", Cofferdam 1-2" In Pump Room Hold Cofferdam 1-2"
 is, &c. Ford Hold 1-3" Port 1-3" Star d After Hold 1-2 1/2" Port 1-2 1/2" Star d In tunnel Well 1-2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3" on Star d side from G.S. Pump. 1-3" on Port side from Bilge Pump
 Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces _____
 Are the Bilge Suction pipes easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
 Sea Connections fitted direct on the skin of the ship yes, except main inlets which are fitted to plating of wells Are they fitted with Valves or Cocks Valves
 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 _____
 Do pipes pass through the bunkers None How are they protected _____
 Do pipes pass through the deep tanks None Have they been tested as per Rule _____

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 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 yes Is it fitted with a watertight door yes worked from top platform
 On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork _____
 Air Compressors, No. See No. of stages gls. Diameters Rpt Stroke 60064 Driven by _____
 Auxiliary Air Compressors, No. one No. of stages 25 cub ft/min capacity @ 350 lbs Driven by Elec. Motor
 Auxiliary Air Compressors, No. one No. of stages See Grimshy Rpt No. C3093 attached to Grimshy Rpt No. 20403
 Engineering Air Pumps, No. See gls. Diameter Rpt No Stroke 60064 Driven by _____

Auxiliary Engines crank shafts, diameter as per Rule _____ as fitted See Grimshy Rpt No. 20403 No. 3 off in Eng. Room Position No. 1-Port fore, No. 2-Port aft, No. 3-Star fore

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 _____ Range of tensile strength _____ Working pressure _____ by Rules Actual _____

Starting Air Receivers, No. *see gls. Rpt. No 60064* Total cubic capacity _____ Internal diameter _____ thickness _____

Seamless, lap welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ Working pressure _____ by Rules Actual _____

IS A DONKEY BOILER FITTED? *No* 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 + stemgear - *Yes* Receivers Separate Fuel Tanks *Yes*

Donkey Boilers General Pumping Arrangements *With hull report* Pumping Arrangements in Machinery Space *Yes*

Oil Fuel Burning Arrangements *Yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *As per list attached to gls. Rpt. No 60064*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops - -	
During erection on board vessel - - -	<i>1938 Sept. 16-29 Oct 3-6-12-21-24-25-28 Nov 1-4-8-10-14-17-22-25-28</i>
Total No. of visits	<i>18</i>

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

Crank shaft _____ Flywheel shaft _____ Thrust shaft _____ Intermediate shafts _____ Tube shaft _____

Screw shafts in place *12/10/38* Propellers in place *12/10/38* Stern tubes in place *6/10/38* Engine seatings *24-10-38* Engines holding down bolts *8-11-38*

Completion of fitting sea connections *24-10-38* Completion of pumping arrangements *22-11-38* Engines tried under working conditions *at sea 25-26-38*

Crank shaft, Material _____ Identification Mark _____ Flywheel shaft, Material _____ Identification Mark _____

Thrust shaft, Material _____ Identification Mark _____ Intermediate shafts, Material *Steel* Identification Marks _____

Tube shaft, Material _____ Identification Mark _____ Screw shaft, Material *Steel* 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 *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—(Gls Rpt No 60064 on Main Engines; Gms Rpt No 20403 on the Aux^d Eng^s) has been efficiently fitted on board, the materials & workmanships being sound & good. The Main & Aux^d Machinery was finally tried out at sea under full & working conditions, & it was found satisfactory in all respects. Manoeuvring trials were carried out, & the capacity of the air receivers was found to be considerably in excess of the Rule requirements. The Aux^d Engine which is the initial starting air compressor can be started by hand.

In my opinion the Machinery of this vessel is eligible to be classed in the Register Book with the notation of +L.M.C. 11-38 & the records of Oil Eng. C.L.

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

The amount of Entry Fee .. £ : : When applied for, _____

Special *1/3rd L.M.C. 11-38* .. £ : : Charged by *Glasgow* when received, _____

Donkey Boiler Fee ... £ : : _____

Travelling Expenses (if any) £ : : _____

Leith.

Committee's Minute

TUE. 6 DEC 1938

Assigned

*+ L.M.C. 11-38
oil by Ch*

John Houston
Engineer Surveyor to Lloyd's Register of Shipping

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