

REPORT ON OIL ENGINE MACHINERY

FEB 14 1938

Received at London Office

Date of writing Report 9th Feb^y 1938 When handed in at Local Office 11th Feb^y 1938 Port of Leith
No. in Survey held at Leith Date, First Survey 24th Aug 1937 Last Survey 5th Feb^y 1938
Reg. Book. 8880 on the Motor vessel "KAHIKA" Number of Visits 20

Built at Leith By whom built Henry Robb & Co Yard No. 245 When built 1938
Engines made at Glasgow By whom made British Auxiliaries Ltd Engine No. 264 When made 1938
Donkey Boilers made at Leith By whom made Leith Boiler No. 265 When made 1938
Brake Horse Power 1280 Owners Union Steamships Co of New Zealand Ltd Port belonging to Melbourne
Nom. Horse Power as per Rule 250 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended ✓

2 or 4 stroke cycle Single or double acting
2 L ENGINES, &c.—Type of Engines
Maximum pressure in cylinders _____ Diameter of cylinders _____ Length of stroke 5.9157 No. of cylinders _____ No. of cranks _____
Mean Indicated Pressure _____ Is there a bearing between each crank _____
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge see Gls. Rpt. N^o 59157
Revolutions per minute _____ Flywheel dia. for particulars Weight _____ Means of ignition _____ Kind of fuel used _____
Crank Shaft, dia. of journals _____ Crank pin dia. _____ Crank Webs _____ Mid. length breadth _____ Thickness parallel to axis _____
Flywheel Shaft, diameter _____ Intermediate Shafts, diameter _____ Thrust Shaft, diameter at collars _____
Tube Shaft, diameter _____ Screw Shaft, diameter _____ Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes _____ Thickness between bushes _____ Is the after end of the liner made watertight in the propeller boss Yes
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 Yes
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 ✓
shaft No If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller 2'-3"

Propeller, dia. 4'-0" Pitch 5'-6 1/2" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 17.4 sq. feet
Method 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 see Gls. Rpt. N^o 59157 Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Exhaust

Are the exhaust pipes and silencers near the waterline, what means are arranged to prevent water from being syphoned back to the engine up funnel
Cooling Water Pumps, No. _____ Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
Bilge Pumps worked from the Main Engines, No. 1-Port Eng Diameter 90 Stroke 140 Can one be overhauled while the other is at work ✓
Pumps connected to the Main Bilge Line _____ No. and Size 2 - Drysdale "Centrex" Pumps - 4.5 tons/hr capacity
How driven Electric Motors

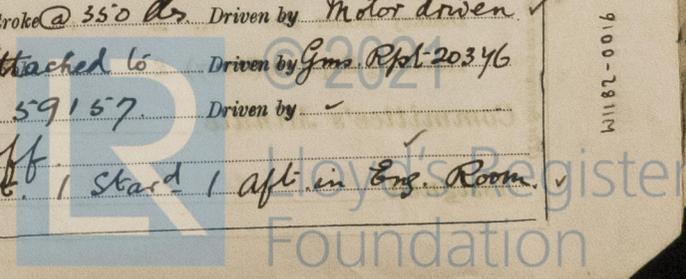
Is the cooling water led to the bilges _____ If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements _____
Ballast Pumps, No. and size 1 - Drysdale "Centrex" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 4.5 tons/hr
Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—
In Machinery Spaces Star. for 1-2 1/2", Port for 1-2 1/2" Aft. Centre 1-2 1/2" In Pump Room E.R. Cofferdam 1-2"
In Holds, &c. No 1 - Star. 1-3", Port 1-3", No 2 - Star. 1-2 1/2" Port 1-2 1/2" Cofferdam frames 54/55 1-2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-3 1/2" to G.S. Pumps; 1-3 1/2" to Bilge & Ballast Pump.
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces _____
Are they fitted with Valves or Cocks Both
Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both
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 Below
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 ✓
What pipes pass through the bunkers None How are they protected _____
What pipes pass through the deep tanks None 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 Yes
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 Yes Is the Shaft Tunnel watertight None 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 Gls. Diameters Rpt. Stroke N^o Driven by 59157
Auxiliary Air Compressors, No. one No. of stages 43 capacity 350 Driven by Motor driven
Small Auxiliary Air Compressors, No. one No. of stages See Hull Diagram attached to 5743 Driven by Gms. Rpt. 20346
Scavenging Air Pumps, No. _____ Diameter Rpt. N^o Stroke 59157 Driven by _____
Auxiliary Engines crank shafts, diameter _____ as per Rule _____ as fitted See Grimsby Rpt N^o 20346 No. 3 Position 1 Port, 1 Star, 1 Aft. in Eng. Room

15-2-38

9100-28111



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 _____ No. 59157 Range of tensile strength _____ Working pressure _____
Starting Air Receivers, No. *See gls. Rpt.* 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? *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 *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 59157.*

The foregoing is a correct description,

Manufacturer. _____

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - - *1937 Aug. 24 Nov. 12. 16. 26. 29. Dec. 10. 21. 28. 29 1938 Jan. 5. 11. 13. 18. 20. 25. 26. 29. 30. Feb. 3. 5.*
 Total No. of visits *20.*

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 *10/12/37* Propellers in place *10/12/37* Stern tubes in place *26-11-37* Engine seatings *12-11-37* Engines holding down bolts *5-1-38*
 Completion of fitting sea connections *26-11-37* Completion of pumping arrangements *29-1-38* Engines tried under working conditions *at sea 3-2-*

Crank shaft, Material _____ Identification Mark _____ Flywheel shaft, Material _____ Identification Mark _____
 Thrust shaft, Material _____ Identification Mark _____ Intermediate shafts, Material *Steel* Identification Marks *24-11-37*
 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 If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c.)
This Machinery—(Gls. Rpt No 59157 for Main Engines, Gimsley Rpt No 20346 for the Aux² Engines)—has been efficiently fitted on board, the materials & workmanship being sound & good. The Main & Aux² Machinery was finally tried out at sea, under full load & 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 requirement. The Aux² Engine which drives 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 2-38, & the records of Oil Eng. C.L.

The amount of Entry Fee .. £ : *See gls report*
 Special 1/5th L.M.C. £ *12.10* : *To be collected by Glasgow & credited to Keith*
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ : *19*

John Houston
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI, 18 FEB 1938*

Assigned + *due 2.38*
Ch *see eng*

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

