

REPORT ON OIL ENGINE MACHINERY

FEB 14 1938

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 Single Motor "KAHIKA" Screw vessel Gross 1534
Triple Leith By whom built Henry Robb Ltd Yard No. 245 When built 1938
Quadruple Glasgow By whom made British Auxiliaries Ltd Engine No. 264 When made 1938
 Donkey Boilers made at Leith By whom made Boiler No. 264 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 ✓

IL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders ✓ Diameter of cylinders ✓ Length of stroke 59 15 7 No. of cylinders ✓ No. of cranks ✓
 Mean Indicated Pressure ✓

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge see Gls. Rpt. No. 59157 Is there a bearing between each crank ✓
 Revolutions per minute ✓ Flywheel dia. ✓ Weight ✓ Means of ignition ✓ Kind of fuel used ✓

Crank Shaft, dia. of journals as per Rule Crank pin dia. as per Rule Crank Webs Mid. length breadth shrink Thickness parallel to axis ✓
as fitted as fitted as fitted Mid. length thickness shrink Thickness around eye hole ✓

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 as fitted as fitted

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

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 Brass 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 ✓ Are the exhaust pipes and silencers water cooled or lagged with Exhaust
non-conducting material ✓ ✓ ✓

Cooling Water Pumps, No. 1 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 7/8" Can one be overhauled while the other is at work ✓
✓ ✓

Pumps connected to the Main Bilge Line No. and Size 2 - Drysdale "Centrex" Pumps - 45 tons/hr capacity
How driven Electric Motors

Is the 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 ✓
arrangements ✓

Ballast Pumps, No. and size 1 - Drysdale "Centrex" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size
45 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 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 ✓
✓ ✓

ed from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes Are they fitted with Valves or Cocks Both
✓ ✓

Are all Sea Connections fitted direct on the skin of the ship yes Are the Overboard Discharges above or below the deep water line Below
✓ ✓

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes 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 yes How are they protected ✓
✓ ✓

What pipes pass through the bunkers None Have they been tested as per Rule ✓
✓ ✓

What pipes pass through the deep tanks None Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
✓ ✓

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
✓

Main Air Compressors, No. See No. of stages Gls. Diameters Rpt. Stroke No Driven by 59157
✓ ✓ ✓ ✓ ✓

Auxiliary Air Compressors, No. one No. of stages 43 cub ft per min capacity Stroke @ 350 lbs Driven by Motor driven
✓ ✓ ✓ ✓ ✓

Small Auxiliary Air Compressors, No. one No. of stages See Hull Diagram 5743 attached to Drum Driven by Gms. Rpt. 20346
✓ ✓ ✓ ✓ ✓

Scavenging Air Pumps, No. See Gls. Diameter Rpt. No Stroke 59157 Driven by ✓
✓ ✓ ✓ ✓ ✓

Auxiliary Engines crank shafts, diameter as per Rule See Grimsby Rpt No 20346 No. 3 off Position 1 Port 1 Star 1 Aft in Eng. Room
as fitted ✓ ✓ ✓ ✓

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

Actual

Starting Air Receivers, No.

See

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

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

(If not, state date of approval)

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--

Total No. of visits

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.

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 12/12/37 Propellers in place 12/12/37 Stern tubes in place 26-11-37

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

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, Gtinsley 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 .. £

Special 1/5th L.M.C. £ 12.10

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

See Gls report

When applied for,

to be collected by Glasgow & credited to Keith

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

Committee's Minute

FRI. 18 FEB 1938

Assigned + Que 2.38

Ch

see eng



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