

RECEIVED

Rpt. 4b.

5 JUL 1949

DATE

Writing Report 27th Jan. 1949 When handed in at Local Office

Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 19.4.49 Last Survey 24.6.1949

Reg. Book. 40524 on the Twin Triple Screw vessel T.S.M.V. "MOMBASA" Tons Gross 2213 Net 1090

Built at Link By whom built Messrs Henry Robb & Co. Yard No. 3795 When built 1949

Engines made at Glasgow By whom made Messrs British India Engine Co. Ltd. Engine No. 739/40 When made 1949

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 1600 Owners British India Steam Navigation Co. Ltd. Port belonging to London

M.N. Power as per Rule 367 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended Open Sea

OIL ENGINES, &c. Type of Engines Heavy oil M.4.5. M. 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 855 lbs/sq. in Diameter of cylinders 13 3/8 Length of stroke 570 No. of cylinders 5 No. of cranks 5

Mean Indicated Pressure 100 lbs/sq. in Ahead Firing Order in Cylinders 1.5.2.3.4 Span of bearings, adjacent to the crank, measured

From inner edge to inner edge 494 Is there a bearing between each crank No Revolutions per minute 250

Flywheel dia. 550 Weight 6,900 lbs Moment of inertia of flywheel (lbs. in² or Kg. cm.²) 8060 Means of ignition Comp. Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule 2.7 Crank pin dia. 235 Crank webs Mid. length breadth 324.3 Thickness parallel to axis

Flywheel Shaft, diameter as per Rule 2.7 Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted 250

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

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

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 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 tube shaft If so, state type Length of bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch 7-3 app. No. of blades Material whether moveable Total developed surface sq. feet

Moment of inertia of propeller (lbs. in² or Kg. cm.²) Kind of damper, if fitted

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of

lubrication Hand Thickness of cylinder liners 25.5 Are the cylinders fitted with safety valves 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

Pumps connected to the Main Bilge Line No. and size How driven

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 Power Driven Lubricating Oil Pumps, including spare pump, No. and size

Are 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

In holds, &c.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily

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

Are 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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks 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

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. No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

What provision is made for first charging the air receivers

Seavenging Air Pumps, No. diameter 850 stroke 350 driven by M.E

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

Have the auxiliary engines been constructed under special survey Is a report sent herewith



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AIR RECEIVERS:—Have they been made under survey *✓* State No. of report or certificate *C. 71212.*

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 *✓*

Injection Air Receivers, No. *✓*

Cubic capacity of each *✓*

Internal diameter *✓*

thickness *✓*

Seamless, welded or riveted longitudinal joint *✓*

Material *✓*

Range of tensile strength *✓*

Working pressure *by Rules*

Starting Air Receivers, No. *3.*

Total cubic capacity *100 cu ft.*

Internal diameter *25 1/2"*

thickness *9/16"*

Seamless, welded or riveted longitudinal joint *Riv. lid*

Material *S.M. Steel.*

Range of tensile strength *28 1/2 to 72"*

Working pressure *by Rules*

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 fuel tanks *✓*

Donkey boilers *✓*

General pumping arrangements *✓*

Pumping arrangements in machinery space *✓*

Oil fuel burning arrangements *✓*

Have Torsional Vibration characteristics been approved *✓*

Provided Torsiongraphs

Date of approval *28.4.48.*

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.

G. Scott B.P.E. Ltd. Manufacturer.

Dates of Survey while building During progress of work in shops - *19.4.48. 10. 11. 13. 17. 18. 19. 20. 25. 26. May. 1. 6. 8. 24. June. 1948.*

During erection on board vessel -

Total No. of visits *(incl. in shops.)*

Dates of examination of principal parts—Cylinders *13.5.48. 25.5.48. 19.5.49. 19.5.49.* Covers *6.6.48. 26.5.48. 11.6.48. 11.6.48.* Pistons *19.5.49. 11.6.49.* Rods *19.5.49. 11.6.49.* Connecting rods *19.5.49. 11.6.49.*

Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *✓* Intermediate shafts *✓* Tube shaft *✓*

Screw shaft *✓* Propeller *✓* Stern tube *✓* Engine seatings *✓* Engine holding down bolts *✓*

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

Crank shaft, material *S.M. Steel* Identification mark *18685 6012 4.4.1. 54.5* Flywheel shaft, material *✓* Identification mark *✓*

Thrust shaft, material *S.M. Steel* Identification mark *975 971 703 703 29.11.48 29.11.48.* Intermediate shafts, material *✓* Identification marks *✓*

Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *✓* Identification mark *✓*

Identification marks on air receivers *3-off. N° 71212. 220YD'S TEST. 255 60/10 W.P. 255 "*

Welded receivers, state Makers' Name *R.S. 26.4.49.*

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 *✓*

Description of fire extinguishing apparatus fitted *✓*

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. *Three Engines have been built under special*

survey and in accordance with the Rules and approved Plans.

The materials used and workmanship are good, and on completion the Engines were tried on the test bed at the makers works with satisfactory results.

The Engines are eligible in my opinion for the record of 44766 (with data) when efficiently installed on board steam ship Robb. Ltd. Vessel N° 379.E. T.S.M. "Mambasa"

The torsional vibration characteristics have been approved for a service speed of 250 R.P.M. provided records taken from the completed installation confirm dampen efficiency limits the vibration stress in crankshafts to not more than 3.700 lbs/sq in (see London letter of 28.4.48.)

The amount of Entry Fee ... *£162-2-0*

Special *108-0-0*

Donkey Boiler Fee... *£4-2-0*

Travelling Expenses (if any) £

When applied for *19*

When received *19*

McL...

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW - 6 JUL 1949*

Assigned *Referred for Compt.*



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