

Rpt. 4.

4 FEB 1946

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office. 12 FEB 1946

Date of writing Report 19 When handed in at Local Office 11 FEB 1946 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 8 Aug 44 Last Survey 8 Feb 1946
 Reg. Book EMPIRE MOMBASA (Number of Visits 58)

on the EMPIRE MOMBASA Tons { Gross 7319
 Net 5179

Built at Sunderland By whom built Shipbuilding Corp. (near Branch) Yard No. 7 When built 1946

Engines made at Chesterfield By whom made Markham & Co. Ld. Engine No. A.154 When made 1946

Boilers made at Sunderland By whom made G. Clark (1938) Ld. Boiler No. 1362 When made 1945

Registered Horse Power 509 Owners Ministry of War Transport Port belonging to Sunderland

Nom. Horse Power as per Rule 509 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended 635-10 R.B.

See Sheffield Rpt. No 524.

Revs. per minute

Engines, &c.—Description of Engines

Dia. of Cylinders 13.33" Length of Stroke 13 5/8" No. of Cylinders 4 No. of Cranks 2

Crank shaft, dia. of journals 13.33" Crank pin dia. 13 5/8" Mid. length breadth 14.84" Thickness parallel to axis 13.99"

Intermediate Shafts, diameter 13 5/8" Crank webs 15 1/4" Mid. length thickness 14 1/4" Thickness ground eye-hole 13.99"

Tube Shafts, diameter 13 5/8" Screw Shaft, diameter 15 1/4" Is the tube screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes 13/16" Thickness between bushes 2/32" 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 one length

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 no

If two liners are fitted, is the shaft lapped or protected between the liners no Is an approved Oil Gland or other appliance fitted at the after end of the tube yes

at no If so, state type 15-6" Length of Bearing in Stern Bush next to and supporting propeller 5'-1"

Propeller, dia. 18-3" Pitch 15-6" No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 98 1/2 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 24" Can one be overhauled while the other is at work yes

Feed Pumps { No. and size 2 @ 4" x 9 1/2" x 21" Pumps connected to the Main Bilge Lines { No. and size 1 @ 9 1/2" x 4" x 21" How driven Slam

Ballast Pumps, No. and size 1 @ 10 1/2" x 13" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size —

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary yes

Bilge Pumps:—In Engine and Boiler Room 2 @ 3" In Holds, &c. N°1. 3" φ 18, N°2. 3" φ 18, N°3. 3" φ 18

In Pump Room N°4. 3" φ 18, N°5. 3" φ 18, N°6. 3" φ 18, N°7. 3" φ 18

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 5" (Starboard side) Independent Power Pump Direct Suctions to the Engine Room Bilges, yes

No. and size 1 @ 5" (Starboard side) Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

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 stokehold 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 yes

What Pipes pass through the bunkers For hold bilge suction How are they protected Lead Casings

What pipes pass through the deep tanks none Have they been tested as per Rule yes

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 yes Is it fitted with a watertight door yes (Bilge) worked from Upper deck

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 7248 sq. ft. + 2790 sq. ft. = 10,038 total for R.B.

Which Boilers are fitted with Forced Draft all Which Boilers are fitted with Superheaters all

No. and Description of Boilers 3 J.B. (Spr.) Working Pressure 220 lb/sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? —

Can the donkey boiler be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers — Auxiliary Boilers — Donkey Boilers —

(If not state date of approval)

Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied —

The foregoing is a correct description.

GEORGE CLARK (1938) LTD.

Arthur J. Perry
 DIRECTOR GENERAL MANAGER

Manufacturer.



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Lloyd's Register
 Foundation

W1033-0017

Dates of Survey while building
During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits 58

Dates of Examination of principal parts - Cylinders - Slides - Covers -
Pistons - Piston Rods - Connecting rods -
Crank shaft - Thrust shaft 26/3/45
Tube shaft - Screw shaft 2/5/45
Stern tube 28/5/45
Engine and boiler seatings 18/6/45
Engines holding down bolts 18/6/45
Completion of fitting sea connections 23/5/45
Completion of pumping arrangements 28/1/46
Boilers fixed 29/6/45
Main boiler safety valves adjusted 6/7/45
Thickenss of adjusting washers
Crank shaft material Identification Mark No 13484
Thrust shaft material Identification Mark No 13484
Intermediate shafts, material Identification Mark No 13484
Tube shaft, material Identification Mark No 13484
Screw shaft, material Identification Mark No 13484
Steam Pipes, material Identification Mark No 13484
Test pressure 660 lbs
Date of Test 26/6/45
Is an installation fitted for burning oil fuel
Is the flash point of the oil to be used over 150° F.

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery, Consisting of
Main Engines by Markham & Co Ld (Sheffield Rpt. No 524) & boilers by
Messrs G. Clark (1938) Ld, has been securely fitted on board the
Vessel. The requirements of the Specification have been fulfilled.

The machinery has been tried under working conditions both
alongside Quay & at Sea with satisfactory results & the safety
valves of boilers & superheaters adjusted under steam to working
pressure in accordance with rule requirements.

The machinery is now eligible in my opinion to have
notation of LMC 2.46, T.S (CL) 3 SB (Spt.) 220 lbs.

Certificate 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 ... £ 6 :
3/5 Special ... £ 60 : 6 :
Specification ... £ 15 : 1 :
Travelling Expenses (if any) £ : :
When applied for, L L FEB 1946
When received, 19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ...
Assigned ...
F.D. C.L. Spt.