

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 24th June 1938 When handed in at Local Office 25th June 1938 Port of Leith
 No. in Survey held at Leith Date, First Survey 19th April Last Survey 17th June 1938
 Reg. Book. 18139 on the Single Screw Jug "M.S.C. ARCHER" (Number of Visits 14) Tons { Gross 144 Net 141 }
 Built at Leith By whom built Henry Robb Ltd Yard No. 265 When built 1938
 Engines made at Glydebank By whom made Aitchison Blair Ltd Engine No. 214 When made 1938
 Boilers made at Glasgow By whom made Basclay Busby & Co Ltd Boiler No. 378 When made 1938
 Registered Horse Power ✓ Owners Manchester Ship Canal Co Port belonging to Manchester
 Nom. Horse Power as per Rule 118 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 Trade for which Vessel is intended For towing services on the Manchester Ship Canal

ENGINES, &c.—Description of Engines

Revs. per minute
 Dia. of Cylinders _____ Length of Stroke _____ No. of Cylinders _____ No. of Cranks _____
 Crank shaft, dia. of journals as per Rule Crank pin dia. _____ Crank webs Mid. length breadth shrunk Thickness parallel to axis _____
as fitted _____ Mid. length thickness _____ Thickness around eye-hole _____
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule
as fitted _____ as fitted _____
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube } shaft fitted with a continuous liner {
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 shaft liner made watertight in the
as fitted _____ as fitted 5.946 H. _____
 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 _____
 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 _____ If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____
 Propeller, dia. _____ Pitch _____ No. of Blades _____ Material gl whether Moveable _____ Total Developed Surface _____ sq. feet
 Feed Pumps worked from the Main Engines, No. _____ Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Bilge Pumps worked from the Main Engines, No. _____ Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Feed Pumps { No. and size _____ Pumps connected to the { No. and size _____
 { How driven _____ Main Bilge Line { How driven _____
 Ballast Pumps, No. and size _____ 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;—In Engine Room _____ In Pump Room _____ In Holds, &c. _____

Main Water Circulating Pump Direct Bilge Suctions, No. and size _____ **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 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 sized 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 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 yes
 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 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 None Is it fitted with a watertight door yes worked from _____

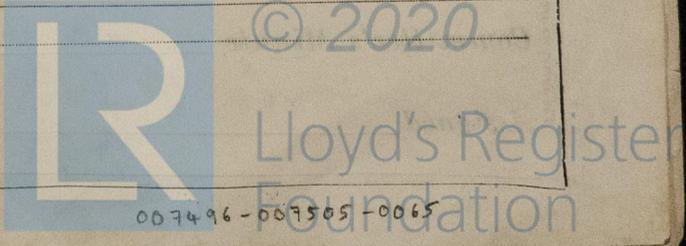
MAIN BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 2304 sq. ft.
 Is Forced Draft fitted No No. and Description of Boilers one single-ended Multi Working Pressure 140 lbs.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Gl. Rpt N° 59635
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
 Is the donkey boiler intended to be used for domestic purposes only ✓

PLANS. Are approved plans forwarded herewith for Shafting ✓ Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)
 Superheaters ✓ General Pumping Arrangements yes 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,

Manufacturer.



If not, state whether, and when, one will be sent?
 Is a Report also sent on the Hull of the Ship?
 The words which do not apply should be deleted.
 Im. 3.32. T.

B.S.B.
 27.6.38.

During progress of work in shops - - }
 Dates of Survey while building }
 During erection on board vessel - - - }
 1938 April 19. 25. 27. May 5. 11. 17. 23. 26. 31. June 9. 10. 13. 15. 17.
 Total No. of visits 14.

Dates of Examination of principal parts—Cylinders Slides Covers
 Pistons Piston Rods Connecting rods
 Crank shaft Thrust shaft Intermediate shafts
 Tube shaft Screw shaft in place 27.4.38 Propeller in place 27.4.38
 Stern tube in place 25.4.38 Engine and boiler seatings 27.4.38 Engines holding down bolts 31-5-38
 Completion of fitting sea connections 27.4.38 In dock 9.6.38
 Completion of pumping arrangements 9.6.38 Boilers fixed 31.5.38 Engines tried under steam At Sea 10.6.38
 Main boiler safety valves adjusted 9.6.38 Thickness of adjusting washers Port Value 15/32" Starboard Value 13/32"
 Crank shaft material Identification Mark Thrust shaft material Identification Mark
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
 Screw shaft, material Identification Mark Steam Pipes, material Copper Test pressure 280 lbs Date of Test 20/5/38 by Gls. Surveyor
 Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. ✓
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓
 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 No. ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

This Machinery - Gls. Rpt No 59464 for the Main Engines, & Gls. Rpt No 59635 for the Boilers - has been efficiently fitted on board, the materials & workmanship being sound & good. The Main & Auxiliary Machinery was finally tried out at sea under full load & working conditions, & it was found satisfactory in all respects.

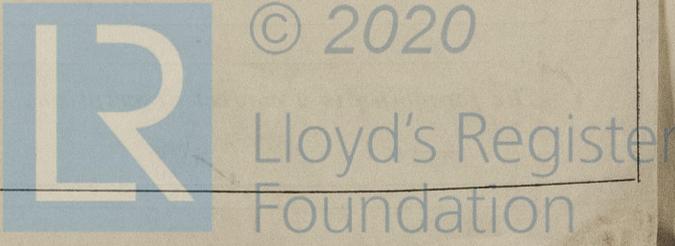
In my opinion the Machinery of this vessel is eligible to be classed in the Register Book with the notation of +LMC-6,38, & the record of T.S. O.G.

The amount of Entry Fee ... £ : :
 Special 1/5 L.M.C. £ 5 : 18 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, collected by Gls. & credited When received, to Lth.

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

Committee's Minute
 Assigned + dmb 6.38
 O.G.

FRI 1 JUL 1938



The Surveyors are requested not to write on or below the space for Committee's Minute.

If not, state whether, and when, one will be sent. In a Report also sent on the Hull of the Ship. Note - The words which do not apply should be deleted.