

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 10 FEB 1925

Date of writing Report 10 FEB 1925 When handed in at Local Office 10 FEB 1925 Port of London (Essex)  
 No. in Survey held at Great Yarmouth Date, First Survey 10<sup>th</sup> August 1917 Last Survey 29<sup>th</sup> January 1925  
 Reg. Book. 89777 on the S.S. "Margaret Birch" (Number of Visits 3)  
 Built at New Holland By whom built Barrens (New Holland) Shipyard Ltd Yard No. 156 When built  
 Engines made at Great Yarmouth By whom made Grathree & Co Ltd Engine No. 545 when made 1925  
 Boilers made at Stockton By whom made Piley Bros Ltd Boiler No. 5057 when made 1920  
 Registered Horse Power \_\_\_\_\_ Owners G. F. Birch & Co (1919) Ltd Port belonging to Aull  
 Nom. Horse Power as per Rule 71 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound, Surface condensing  
 Dia. of Cylinders 17 + 34 Length of Stroke 24 Revs. per minute 110 No. of Cylinders 2 No. of Cranks 2  
 Dia. of Crank shaft journals 7 1/4 as fitted 7 1/4 Dia. of Crank pin 7 1/4 Crank webs Mid. length breadth 10 Thickness parallel to axis 4 1/2 x 5 1/2  
 Diameter of Thrust shaft under collars 7 1/2 as fitted 7 1/2 Diameter of Tunnel shaft 7 1/2 as fitted 7 1/2 Diameter of Screw shaft 8 1/2 as fitted 8 1/2 Is the Screw shaft  
 fitted with a continuous liner the whole length of the stern tube No liner 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 joints burned Yes 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 Yes Is an approved appliance fitted at the after end of the shaft to permit  
 of it being efficiently lubricated No Length of Stern Bush 2-10 1/2 Diameter of Propeller 9-0

Pitch of Propeller 10-6 No. of Blades 4 State whether Moveable No Total Surface 28.5 square feet.  
 No. of Feed Pumps fitted to the Main Engines one Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes  
 No. of Bilge Pumps fitted to the Main Engines one Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps one, 5 1/2 x 3 1/2 x 5, Duplex  
 No. and size of Pumps connected to the Main Bilge Line Yes  
 No. and size of Ballast Pumps \_\_\_\_\_ No. and size of Lubricating Oil Pumps, including Spare Pump Yes

Are two independent means arranged for circulating water through the Oil Cooler Yes No. and size of suction connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room One 2" from Main Engine + One 2" from donkey, and in Holds, &c. Two 2" in hold, one 2" from  
 fore peak + after peak respectively.

No. and size of Main Water Circulating Pump Bilge Suctions one, 4" dia No. and size of Donkey Pump Direct Suctions  
 to the Engine Room Bilges one, 2" dia 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 connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves + cocks  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes 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 are carried through the bunkers Suctions to hold fore peak How are they protected Under wood ceiling  
 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 Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 1430  
 For ced Draft fitted No No. and Description of Boilers One, single ended Working Pressure 130 lb  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes  
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers Yes Donkey Boilers Yes  
 (If not state date of approval)  
 General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied:—  
 2 Connecting rods, top end both trunks Yes  
 2 " " " " both end both trunks Yes  
 2 Main bearing bolts Yes  
 1 set coupling both trunks Yes  
 1 set feed bilge pump valves Yes  
 1 set of piston springs Yes  
 A quantity of assorted bolts + nuts + iron of various sizes Yes

The foregoing is a correct description  
 J. A. Chaudhary

Manufacturer.



014513-014530-0341

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

During progress of work in shops -- (1917) Aug 10-17-23 SEP 7-28 OCT 30. (1919) OCT 2-16 DEC 10-31 (1920) JAN 14 FEB 6 MAR 25 MAY 14  
 DATES OF SURVEY WHILE BUILDING  
 During erection on board vessel --- JUNE 30 NOV 29 DEC 7-16 (1924) FEB 25 APR 10-16 MAY 8 OCT 31 (NOV 14 20-24 DEC 4-10)  
 14-11-24, NOV 20-24 DEC 4-10-17-22 (1925) JAN 29  
 Total No. of visits 31

Dates of Examination of principal parts - Cylinders 17.8.17 28.9.17 Slides 25.2.24  
 Covers 25.2.24 Pistons 26.2.24 Rods 23.8.17 7.9.17  
 Connecting rods 30.10.17 Crank shaft 26.2.24 Thrust shaft 28.9.17  
 Tunnel shafts ✓ Screw shaft 16.4.24, 8.5.24 Propeller 20.11.24  
 Stern tube 8.5.24 Engine and boiler seatings 20.11.24 4.12.24 Engines holding down bolts 4.12.24  
 Completion of pumping arrangements 22.12.24 Boilers fixed 20.11.24 4.12.24 Engines tried under steam 22.12.24  
 Completion of fitting sea connections 20.11.24 Stern tube 24.11.24 Screw shaft and propeller 24.11.24  
 Main boiler safety valves adjusted 22.12.24 Thickness of adjusting washers P.  $\frac{7}{32}$ " S.  $\frac{1}{4}$ "  
 Material of Crank shaft Steel Identification Mark on Do. N° 4459 G.A.H.  
 Material of Thrust shaft Steel Identification Mark on Do. N° 4460 A.E.F.  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓  
 Material of Screw shaft Steel Identification Marks on Do. N° 2267 A.E.F.  
 Material of Steam Pipes Copper Test pressure 260 lb Date of Test 17.12.24 ✓  
 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 carrying and burning oil fuel 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.)

The machinery of this vessel has been constructed under special survey in accordance with the approved plans & rules of this Society, the materials & workmanship are good, the steam pipes have been tested as above & found sound & good.  
 The machinery has been examined whilst being installed on the vessel, tried under working conditions & found satisfactory. The safety valves adjusted under steam to blow at 130 lbs.  
 In my opinion the vessel is eligible for the record of + L.M.C. 1-25.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1-25.

*J.W.D.*  
19/2/25 *A.E.F.*

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 £ 2-0-0  
 Special Tonnage £ 17-15-0  
 3/5 for survey during construction and inspection on board £ 19-16-0  
 Donkey Boiler Fee ... £  
 Travelling Expenses (if any) £ 7-18-10

When applied for, FEB 1925

When received, 12.2.1925

*A.E. Farriner*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

13 FEB 1925

Assigned

+ L.M.C. 125



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