

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

16 JUN 1926

Date of writing Report 9th June 1926 When handed in at Local Office 11th June 1926 Port of Greenock
 No. in Survey held at Port Glasgow Date, First Survey 16th November 1925 Last Survey 8th June 1926
 Reg. Book. on the NON PROPELLING BUCKET DREDGER "GARSTONIA" (Number of Visits 24)
 Built at Port Glasgow By whom built Messrs Ferguson Bros. Ltd. Yard No. 248 When built 1926
 Engines made at Port Glasgow By whom made " " Engine No. " when made "
 Boilers made at Jarrow By whom made Messrs Palmers Ltd. Boiler No. 1061/2 when made "
 Registered Horse Power " Owners London, Midland & Scottish Railway Port belonging to London
 Nom. Horse Power as per Rule 84 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Dredging in the River Mersey at Garston

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute ✓
 Dia. of Cylinders 12"-19"-32" Length of Stroke 24 No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 6.45 Crank pin dia. 6 1/2 Crank webs Mid. length breadth 12 1/4" Thickness parallel to axis 4 5/8"
as fitted 6 1/2 Mid. length thickness 4 9/8" Thickness around eye-hole 2 7/8"
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule
as fitted NONE as fitted NONE
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner ✓
as fitted NONE as fitted NONE
 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 ✓ 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 the tube shaft ✓ Length of Bearing in Stern Bush next to and supporting propeller ✓
 Propeller, dia. NONE Pitch ✓ No. of Blades ✓ Material ✓ whether Moveable ✓ Total Developed Surface ✓ sq. feet
 Feed Pumps worked from the Main Engines, No. 1 Diameter 2 1/2" Stroke 12 Can one be overhauled while the other is at work ✓
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 2 1/2" Stroke 12 Can one be overhauled while the other is at work ✓
 Feed Pumps { No. and size 1-6x4x6 Pumps connected to the { No. and size 1-6x6x6 1-6x4 1/4x6
 { How driven STEAM, DUPLEX Main Bilge Line { How driven STEAM, DUPLEX
 Ballast Pumps, No. and size NONE Lubricating Oil Pumps, including Spare Pump, No. and size NONE
 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 and Boiler Room 3-2 1/4"
 In Holds, &c. 4-2 1/4"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-4 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1-2 3/4" 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 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 AFT WINCH STEAM PIPES How are they protected STEEL CASING
 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 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 ✓ worked from ✓

MAIN BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers 1800 sq
 Is Forced Draft fitted No No. and Description of Boilers 2. S.B. Working Pressure 180
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓
 PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers Yes Auxiliary Boilers None Donkey Boilers None
 (If not state date of approval)
 Superheaters None General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements None

SPARE GEAR. State the articles supplied:—
Two top end bolts and nuts. One top end brass. One bottom end brass. Two bottom end bolts and nuts. Two main bearing bolts and nuts. One set of feed and bilge pump valves. One set of stir pump valves. One safety valve spring. One set of coupling bolts and nuts.

The foregoing is a correct description,
 FERGUSON BROTHERS (Port-Glasgow) LTD.

Robert Ferguson DIRECTOR.

Manufacturer.



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Dates of Survey while building: (1925) Nov. 16, 27. Dec. 2, 7, 9, 16, 22, 30. (1926) Jan. 12, 18. Feb. 1, 4, 8, 16, 23, 26. Mar. 1, 8, 11, 24. Apr. 19, 23. June 5, 8.
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits **22**

Dates of Examination of principal parts—Cylinders **30-12-25** Slides **14/2/26** Covers **30-12-25**
 Pistons **8-2-26** Piston Rods **8-2-26** Connecting rods **8-2-26**
 Crank shaft **26-2-26** Thrust shaft **NONE** Intermediate shafts **NONE**
 Tube shaft **NONE** Screw shaft **NONE** Propeller **NONE**
 Stern tube **NONE** Engine and boiler seatings **11-3-26** Engines holding down bolts **24-3-26**
 Completion of pumping arrangements **5-6-26** Boilers fixed **24-3-26** Engines tried under steam **8-6-26**
 Main boiler safety valves adjusted **5-6-26** Thickness of adjusting washers **P 9/32 S 1/16 P 1/8 S 9/32**
 Crank shaft material **MILD STEEL** Identification Mark Thrust shaft material **NONE** Identification Mark
 Intermediate shafts, material **NONE** Identification Marks Tube shaft, material Identification Mark
 Screw shaft, material **NONE** Identification Mark Steam Pipes, material **COPPER** Test pressure **360** Date of Test **23-4-26**
 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 **Yes**. If so, state name of vessel **P.L.A. N°**

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery has been built under special survey, in accordance with the Rules and approved plans. The materials and workmanship are good. The machinery has now been securely fitted on board the vessel, and tried under power with satisfactory results.
 For boilers see Hwe Rpt N° 80141.
 The machinery of this vessel is eligible, in my opinion, for record of survey **+ NB 6-26**
Non propelling

It is submitted that this vessel is eligible for THE RECORD. + NB 6.26.

180 lbs.
JWD
 16/6/26

J. Davey
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 : 0 / When applied for.
 Special ^{3/5} ... £ 13 : 1 : 0 / 11th June, 1926
 Donkey Boiler Fee ... £ : : /
 Travelling Expenses (if any) £ ✓ : : / 6.8.19
 500

Committee's Minute **GLASGOW 15 JUN 1926**

Assigned + NB 6.26 *JWD*



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GREENOCK
 Certificate to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.