

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 26 AUG 1924

Date of writing Report 21<sup>st</sup> August 1924 When handed in at Local Office 21<sup>st</sup> August 1924 Port of Southampton

No. in Survey held at Southampton Date, First Survey 31<sup>st</sup> March 1923. Last Survey 21<sup>st</sup> August 1924.

Book. on the Pilot Boat "PIONEER." (Number of Visits 59.)

Tons { Gross 281.34  
Net 134.58.

Built at Southampton By whom built J. J. Thornycroft & Co. Ltd. Yard No. 1028 When built 1924

Engines made at do By whom made do Engine No. 1028 when made 1924

Boilers made at do By whom made do Boiler No. 1028 when made 1924.

Registered Horse Power Owners Honourable Corporation of Port belonging to London.

Nom. Horse Power as per Rule 103. ~~102.85~~ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

## ENGINES, &amp;c.—Description of Engines

Triple Expansion

Dia. of Cylinders 13 $\frac{1}{2}$ , 22, 35 Length of Stroke 27 Revs. per minute 130 No. of Cylinders 3 No. of Cranks 3

Dia. of Crank shaft journals as per rule 7.27" as fitted 7 $\frac{1}{2}$ " Dia. of Crank pin 7 $\frac{1}{2}$ " Crank webs Mid. length breadth 8 $\frac{1}{2}$ " Thickness parallel to axis shrunk Thickness around eye-hole

Diameter of Thrust shaft under collars as per rule 7.27" as fitted 7 $\frac{1}{2}$ " Diameter of Tunnel shaft as per rule 6.92" as fitted 7" Diameter of Screw shaft as per rule 7.78" as fitted 8" Is the Screw shaft fitted with a continuous liner the whole length of the stern tube Yes 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 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

Pitch of Propeller 9'-8" No. of Blades 4 State whether Moveable Solid C.I. Total Surface 28.4 square feet.

Length of Stern Bush 2'-8" Diameter of Propeller 9'-6"

No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 3 $\frac{1}{4}$ " Stroke 11" Can one be overhauled while the other is at work Yes

No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 3 $\frac{1}{4}$ " Stroke 11" Can one be overhauled while the other is at work Yes

Total number and size of power driven Feed and Bilge Auxiliary Pumps 1 Aux. Feed Pump 6 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " x 8" vertical Simplex & 1 Fire Bilge Pump 7" x 6" x 6"

No. and size of Pumps connected to the Main Bilge Line 2 on main eng. 3 $\frac{1}{4}$ " x 11" and 1 independent Bilge pump duplex 7" x 6" x 6"

No. and size of Ballast Pumps No. and size of Lubricating Oil Pumps, including Spare Pump

Are two independent means arranged for circulating water through the Oil Cooler No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 2 suction in each 2" bore and in Holds, &c. 3 suction in each 2" bore

No. and size of Main Water Circulating Pump Bilge Suctions One 4" bore No. and size of Donkey Pump Direct Suctions

to the Engine Room Bilges One 2" bore 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 Both

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 Below escape air pump discharge overboard

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 None How are they protected

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 worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2051 #

Is Forced Draft fitted No No. and Description of Boilers One single ended Working Pressure 180 lbs.

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 Donkey Boilers

(If not state date of approval) 17-3-23.

General Pumping Arrangements Not yet. Oil fuel Burning Piping Arrangements Coal Fired.

SPARE GEAR. State the articles supplied:—1 Tail End shaft. 1 set of piston rings for each piston. 1 Propeller. 2 Conn. Rod top End bolts & nuts. 2 Conn. Rod bottom End bolts & nuts. 2 main bearing bolts & nuts. 1 set of coupling bolts & nuts. 6 junk ring bolts & nuts. 1 set of metallic packing for 1 piston Rod. 1 set of metallic packing for 1 slide valve rod. Soft packing sufficient to pack glands of main & aux. Machinery & boiler mountings 3 times. 1 set of valves & guards for air pump. 1 set of piston rings for each auxiliary. 1 set of Pump Packing for each pump. 1 set of pump valves for each pump. 1 spring for each escape valve. 2 Condenser tubes. 50 Condenser ferrules. 2 safety valve springs. 6 boiler tubes. 6 tube stoppers. 6 joints for each manhole. 12 gauge glasset. 36 gauge glass packing rings. 1 set of stock, taps, & dies. 1/4" to 1 1/4" 1 set of Litchard 6 bolts & nuts of each size used in pipe joints. 28 lbs of assorted bolts & nuts. Iron bars of various sizes. 1 propeller nut & spanner. Various size spanners and Engineers tools Etc.

The foregoing is a correct description,

JOHN L. THORNYCROFT & CO. LTD.

J. Donaldson.

Manufacturer.

DIRECTOR.



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1923. 21<sup>st</sup> Mar. 16<sup>th</sup> Apr. 1, 3, 11, 23, 25 May. 7, 20, 31 June 4, 12, 19, 28, 31 July. 3, 13, 19, 26 Sept. 17, 24.  
 During progress of work in shops -- Nov. 1, 7, 20 Jan. 1, 4 Feb. 4, 18, 20, 22, 27 March 3, 5, 6, 12, 18, 19, 25.  
 Dates of Survey while building During erection on board vessel --- 1924. April 9, 23, 24, 28 May. 8, 13, 15, 23, 27, 30 June 3, 4, 11, 13, 16, 17, 20, 26.  
 July 17, 28. August 21.  
 Total No. of visits 59.

HP & MP. 4-7-23  
 Dates of Examination of principal parts - Cylinders L.P. 11-7-23 Slides 3-9-23  
 Covers 3-9-23 Pistons 3-9-23 Rods 3-9-23  
 Connecting rods 3-9-23 Crank shaft 7-6-23 Thrust shaft 25/5/23  
 Tunnel shafts 25/5/23 Screw shaft 12-3-24 Propeller 13/5/23  
 Stern tube 3-9-23 Engine and boiler seatings 30-5-24 Engines holding down bolts 13-5-24  
 Completion of pumping arrangements 13-5-24 Boilers fixed 30-5-24 Engines tried under steam 21-8-24  
 Completion of fitting sea connections 13-5-24 Stern tube 24-10-23 Screw shaft and propeller 13-5-24  
 Main boiler safety valves adjusted 26-6-24 Thickness of adjusting washers P 7/16" 5 1/2"  
 Material of Crank shaft S.M. Steel Identification Mark on Do. 1931 P.H.G. 30-5-23  
 Material of Thrust shaft S.M. Steel Identification Mark on Do. 1282 P.H.G. ✓  
 Material of Tunnel shafts " Identification Marks on Do. 1283 P.H.G. ✓  
 Material of Screw shafts " Identification Marks on Do. 1282 P.H.G. ✓  
 Material of Steam Pipes Copper Test pressure 360 lb sq. in. Date of Test 28/8-24  
 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 built under Special Survey, fitted on board in accordance with the Rules, afterwards tested under working conditions with satisfactory results, the materials and workmanship are good, and in our opinion the Vessel is eligible for the record of  $\star$  LMC. 8-24 in the Register Book.

It is submitted that  
 this vessel is eligible for  
 THE RECORD. + LMC 8.24. CL.

J.W.D. P.H.G.  
 28/8/24

The amount of Entry Fee ... £ 3 : 0 :  
 Special ... £ 25 : 15 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 25/8/1924  
 When received, 28/8/24

A. H. Garnett

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 29 AUG 1924

Assigned

+ LMC 8.24  
 C.L.



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