

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Mo. No. 121

Received at London Office 24 JAN 1925

Date of writing Report 19 \_\_\_\_\_ When handed in at Local Office 22/1/1925 Port of Middlesbrough 27 Jan 1925  
 No. in Survey held at Stockton-on-Tees Date, First Survey 15<sup>th</sup> Sept. 1924 Last Survey 20-1-1925  
 Reg. Book. 90296 on the S/S "Peterston" (Number of Visits 4)  
 SUPP  
 Built at Sunderland By whom built Messrs Bartram & Co Ltd Yard No. 258 Tons { Gross 4680  
 Engines made at Stockton By whom made Messrs Blair & Co Engine No. 1962 when made 1925 Net 2707  
 Boilers made at Stockton By whom made Messrs Blair & Co Boiler No. 1962 when made 1925  
 Registered Horse Power 451 Owners Langsons S/S. Co. Ltd Port belonging to London  
 Nom. Horse Power as per Rule 451 Is Refrigerating Machinery fitted for cargo purposes Y Is Electric Light fitted Y  
E. Thomas Radcliffe & Co Mgrs

ENGINES, &c.—Description of Engines Triple Expansion  
 Dia. of Cylinders 27-44½-73 Length of Stroke 48 Revs. per minute 62 No. of Cylinders 3 No. of Cranks 3  
 Dia. of Crank shaft journals as per rule 14.03 as fitted 14½ Dia. of Crank pin 15" Crank webs Mid. length breadth 24½ x 9¾ Thickness parallel to axis 9¾  
 as fitted 14½ Mid. length thickness 9¾ shrunk Thickness around eye-hole 6¾  
 Diameter of Thrust shaft under collars as per rule 14.03 as fitted 15" Diameter of Tunnel shaft as per rule 13.36 as fitted 14 Diameter of Screw shaft as per rule 14.89 as fitted 15¾ 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 in one length 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 tight fit  
 If two liners are fitted, is the shaft lapped or protected between the liners Y Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated no  
 Length of Stern Bush 5'-6" Diameter of Propeller 18'-0"  
 Pitch of Propeller 18'-9" No. of Blades 4 (Barney) State whether Movable no Total Surface 100 square feet.  
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 7½" Stroke 34" Can one be overhauled while the other is at work yes  
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 5" Stroke 34" Can one be overhauled while the other is at work yes  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps 1 Bilge 8" x 9" x 8" splt; 2 feed 7½" x 5½" x 8" splt  
 No. and size of Pumps connected to the Main Bilge Line One 8" x 9" x 8" splt  
 No. and size of Ballast Pumps (2) - 8" x 9" x 8" + 10" x 12" x 12" No. and size of Lubricating Oil Pumps, including Spare Pump none  
 Are two independent means arranged for circulating water through the Oil Cooler Y No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 3 @ 3" and in Holds, &c. each hold 2 @ 3"  
tunnel well 2¼"

No. and size of Main Water Circulating Pump Bilge Suctions one @ 8" No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges one @ 4½" 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 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 ford Suctions How are they protected curved through Bilges  
 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 See Hull Log Is it fitted with a watertight door yes worked from top platform

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers 7650 φ  
 Is Forced Draft fitted no No. and Description of Boilers 3 single ended 35B Working Pressure 180 lbs.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes  
 IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded?  
 PLANS. Are approved plans forwarded herewith for Shafting Y Main Boilers yes Auxiliary Boilers Y Donkey Boilers (No sent to Sunderland for Comp)  
 General Pumping Arrangements With Hull Report Oil fuel Burning Piping Arrangements Y

SPARE GEAR. State the articles supplied:—2 Con Rod Top end bolts, 2 Con Rod Bot end bolts, 2 main bearing bolts, one set of coupling bolts, one set of feed and bilge pump valves, one set of piston springs, a quantity of assorted bolts and nuts, Screw shaft, propeller, 6 boiler tubes, 3 condenser tubes, 2 main and two donkey feed check valves, 2 safety valve springs.

The foregoing is a correct description,  
 BLAIR & CO., LIMITED.  
 H. J. Hamilton

Manufacturer.



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1924. Sep. 15. 18. 22. 26. 29. Oct. 2. 6. 10. 13. 14. 16. 17. 20. 23. Nov. 4. 11. 13. 17. 19. 20. 21. 24. 26. 27. Dec. 2. 4. 10. 12. 15. 1925. Jan. 6. 8. 9. 12. 13. 16. 19. 20. Sld. 24. Nov. 25. Dec. 8. 9. 1925. Jan. 26. 27. Feb. 10. 12. 16. 26. 27

Dates of Survey while building +

During progress of work in shops - - -

During erection on board vessel - - -

Total No. of visits ~~47~~ 50

Dates of Examination of principal parts - Cylinders 11-11-24 Slides 19-11-24  
 Covers 11-11-24 Pistons 11-11-24 Rods 19-11-24  
 Connecting rods 21-11-24 Crank shaft 24-11-24 Thrust shaft 16-10-24  
 Tunnel shafts 6.13.20.24/11/24 & 2/12/24 Screw shaft 10-12-24 Propeller 10-12-24  
 Stern tube 4-11-24 Engine and boiler seatings 22-12-24 Engines holding down bolts 12-1-25  
 Completion of pumping arrangements 20-1-25 Boilers fixed 12-1-25 Engines tried under steam 20-1-25  
 Completion of fitting sea connections 25-11-24 (Sld) Stern tube 25-11-24 (Sld) Screw shaft and propeller 10-12-24  
 Main boiler safety valves adjusted 185-lbs Thickness of adjusting washers 3/8"  
 Material of Crank shaft *Froyd ingot steel* Identification Mark on Do. 7029-N  
 Material of Thrust shaft *do* Identification Mark on Do. 7029-N  
 Material of Tunnel shafts *do* Identification Marks on Do. 7029-N  
 Material of Screw shafts *Froyd screw iron* Identification Marks on Do. 7392. 10-12-24. WM.  
 Material of Steam Pipes *S.D. Copper 1/4" THICK* Reamed in steel 1 1/2" dia. Date of Test 8/9-1-25.  
 Is an adaptation 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, the materials and workmanship are good, the boilers were tested by hydraulic pressure, the engines, main boilers and auxiliaries were examined under steam and found satisfactory.

In our opinion the vessel will be eligible for notation of + LMC with date, when the donkey boiler has been efficiently secured in position, pipes to same connected, casing gear fitted and its safety valves adjusted under steam. See our letter to Sunderland Surveyors attached.

Note.- Electric light installation will be completed at Sunderland.

The Donkey Boiler has now been efficiently secured in position, pipes of same connected, casing gear fitted & safety valves adjusted under steam and in my opinion the vessel is eligible for notation of + L.M.C. 2-25.

G. Anderson.  
 Wm Morrison & W.A. Roberts  
 Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : - : When applied for,  
 Special ... £ 92 : 13 : 23.1.1925  
 Donkey Boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ : : 16 Feb 1925

Committee's Minute **FRI. 13 MAR 1925**  
 Assigned *+ Lmb 2.25*  
*C.L.*

Certificate to be sent to Middlesbrough

