

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY

Received at London Office

12 MAR 1928

NEWCASTLE ON TYNE

Date of writing Report 19th April 1926 When handed in at Local Office 19th April 1926 Port of

No. in Survey held at Leithwood & Walker Date, First Survey 19th May 125 Last Survey 16th April 1926  
Reg. Book. 1997 on the Steel Screw Steamer Arthur W Small (Number of Visits 143.)Built at Walker By whom built Sir H. E. Armstrong Whitworth & Co. Yard No. 1012 Tons Gross 6030Engines made at Leithwood By whom made do Engine No. 60 when made 1926Boilers made at Chwick By whom made do Boiler No. 60 when made 1926Registered Horse Power 626 Owners J. A. Christensen Port belonging to OsloHorse Power as per Rule 626 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yesTrade for which Vessel is intended ForeignEngines, &c.—Description of Engines Triple Expansion Revs. per minute 51No. of Cylinders 3 No. of Cranks 3Crank shaft, dia. of journals as per Rule 13.9 Length of Stroke 51 Mid. length breadth 22.5 Thickness parallel to axis 9.45as fitted 14.625 Crank pin dia. 14.98 Mid. length thickness 10.575 Thickness around eye-hole 8.9/16Intermediate Shafts, diameter as per Rule None Thrust shaft, diameter at collars as per Rule 14.9as fitted 13.5 Screw Shaft, diameter as per Rule 14.96 Is the screw shaft fitted with a continuous liner yesas fitted 13.5 as fitted 15.2 as fitted 15.2 Is the after end of the liner made watertight in thepeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yesThe 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, red leadTwo liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the afterof the tube shaft no Length of Bearing in Stern Bush next to and supporting propeller 5-10 1/2Propeller, dia. 17-6 Pitch 17-6 No. of Blades 4 Material Brass whether Moveable yes Total Developed Surface 99 sq. feetMain Engines, No. 2 Diameter 4 1/2 Stroke 25 1/2 Can one be overhauled while the other is at work yesMain Engines, No. 2 Diameter 4 1/2 Stroke 25 1/2 Can one be overhauled while the other is at work yesNo. and size one 8x5x8 Pumps connected to the Main Bilge Line No. and size one 4 1/2 x 12 1/2 one 9 x 10 x 10How driven Steam How driven SteamLast Pumps, No. and size one 9x10x10 Lubricating Oil Pumps, including Spare Pump, No. and size NoneTwo independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and AuxiliaryPumps;—In Engine and Boiler Room Four, 3 1/2Holds, &c. Three 2 3/4 in forward cargo hold.Water Circulating Pump Direct Bilge Suctions, No. and size One, 12 Independent Power Pump Direct Suctions to the Engine Room Bilges,and size One, 4 1/2 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yesThe 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 yesAll Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks BothThey 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 aboveThey 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 yesPipes are carried through the bunkers None (Oil Tank) How are they protected yesPipes pass through the deep tanks yes Have they been tested as per Rule yesAll Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

department to another yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door yes worked from yesIN BOILERS, &c.—(Letter for record yes) Total Heating Surface of Boilers 9810 sq. ft.Forced Draft fitted yes No. and Description of Boilers 3 Single End Working Pressure 180 lb per sq. in.A REPORT ON MAIN BOILERS NOW FORWARDED? yesA DONKEY BOILER FITTED? no If so, is a report now forwarded? yesANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers None Donkey Boilers None

(If not state date of approval)

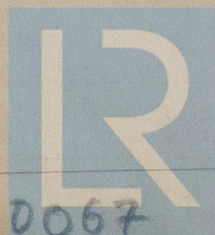
Heaters None General Pumping Arrangements yes Oil fuel Burning Piping Arrangements yesARE GEAR. State the articles supplied: Two top & two bottom end bolts & nuts, 2 main bearingbolts & nuts, one set of coupling bolts & nuts, one set of feed & one set of bilge pumpbolts & nuts, 400 assorted bolts & nuts, a few bars of iron, 4 cast ironpropeller blades, one set of U.S. packing for HP piston & valve rod and30 piston & valve rod, 6 cylinder cross studs & nuts 12 jam nut & bolts& nuts, 4 valve chest cross studs, 24 condenser tubes for each condenser& females for condensers etc.

The foregoing is a correct description.

SIR W. G. ARMSTRONG, WHITWORTH &amp; CO. LIMITED.

J. A. Christensen

Manufacturer.



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Lloyd's Register  
Foundation

W1115-0067



1925  
May 19. 25. 27. June 3. 10. 15. 16. 18. 19. 22. July 20. 22. 29. Aug 5. 6. 7. 12. 14. 17. 20. 24. 25. 26. 27. 28. Sept  
1926  
Jan 5. 6. 7. 8. 11. 12. 13. 14. 15. 18. 19. 21. 22. 25. 26. 27. 28. 29. 30. Feb. 1. 2. 3. 4. 5. 8. 9. 10. 12. 15. 17. 18. 22. 23.  
Mar. 1. 2. 3. 5. 8. 9. 11. 12. 15. 16. 17. 18. 19. 22. 23. 25. 26. 27. 29. 31. Apr. 6. 9. 12. 13. 15. 16.  
Total No. of visits 143.

Dates of Examination of principal parts—Cylinders 6/8. 14/8. 17/8. 20/8. 3/9. 9/9. 16/9. 6/10/25. Slides 14/8. 20/9/25. Covers 17/8. 20/8. 25/8. 9/9.  
Pistons 14/8. 17/8. 20/9/25. Piston Rods 17/8. 20/8. 25/8. 27/8. 7/9/25. Connecting rods 6/8. 20/8. 25/8. 27/8. 7/9.  
Crank shaft 22/7. 27. 6/8. 17/8. 20/8. Thrust shaft 2/9. 4/9. 10/9. 14/9/25. Intermediate shafts 2/9. 4/9. 9/9. 10/9. 14/9.  
Tube shaft None. Screw shaft 7/9. 9/9. 10/9. 14/9. 16/9. 27/10/25. Propeller 2/11. 15/12. 17/12. 27/12/25.  
Stern tube 7/9. 22/10. 26/11. 18/12/25. Engine and boiler seatings 29/1/26. Engines holding down bolts 6/2. 9/2. 17/2. 1/3. 4/3.  
Completion of pumping arrangements 9/4/26. Boilers fixed 9/4/26. Engines tried under steam 13/4/26.  
Main boiler safety valves adjusted 31/3/26. Thickness of adjusting washers 15/64. 17/64. 9/32. 17/64. 9/32.  
Crank shaft material S M Steel Identification Mark GM 18/1/26. Thrust shaft material S M Steel Identification Mark 3906M.  
Intermediate shafts, material None Identification Marks ✓. Tube shaft, material None Identification Mark ✓.  
Screw shaft, material S M Steel Identification Mark 1823. 18/1/26. Steam Pipes, material Copper. Test pressure 360 lb. Date of Tests 22/1. 25/1. 30/1. 4/2. 9/2.  
Is an installation fitted for burning oil fuel Yes, and or coal. Is the flash point of the oil to be used over 150°F. Yes.  
Have the requirements of the Rules for carrying and burning oil fuel been complied with Yes.  
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 of good quality, it has been securely fitted on board and a satisfactory oil fuel burning trial run in the North Sea for the voyage out. Coal is to be burnt.

The machinery of this vessel is now in my opinion eligible for record ∴ LMC 4. 26 (in red) and fitted for oil fuel burning flash point above 150° in register book.

Plans of boilers, safety stop valve seats & mountings, oil fuel burning arrangements, bilge & ballast pumping & shafting, report on shafting, tubes & safety valves and steel & iron invoices.

It is submitted that this vessel is eligible for THE RECORD. + LMC 4. 26. FD. CL. Fitted for oil fuel 4. 26. FP above 150°F.

George Murdoch.  
Engineer Surveyor to Lloyd's Register of Shipping  
17/5/26

The amount of Entry Fee ... £ 6 : 0 :  
Special ... £ 106 : 6 :  
Donkey Boiler Fee ... £ None :  
Travelling Expenses (if any) £ :  
When applied for, 10. MAY 1926  
When received, 9. 6. 26

Committee's Minute 21. MAY 1926  
Assigned + LMC 4:26 FD. CL. L.  
Fitted for Oil Fuel 4:26 F.P. above 150°F

