

REPORT ON MACHINERY.

Port of Greenock

Received at London Office **WED. 9 MAY 1906**

No. in Survey held at Greenock Date, first Survey 20th June 1904: Last Survey 30th April 1906
 Reg. Book. 122 Supplement on the Steel S.S. "Auchendale" (Russell & Co. No. 556) (Number of Visits 56)
 Master R. M. McClure Built at Port Glasgow By whom built Russell & Co. Tons {Gross / Net} When built 1906
 Engines made at Greenock By whom made J. G. Kincaid & Co. when made 1906
 Boilers made at Glasgow By whom made Lindsay Burnet & Co. when made 1906
 Registered Horse Power _____ Owners Purdie, Glen & Miller Port belonging to Glasgow
 Nom. Horse Power as per Section 28 355 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25"-41"-68" Length of Stroke 48" Revs. per minute 90 Dia. of Screw shaft as per rule 14.30 Material of Wrot. Iron
 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 water tight
 in the propeller boss Yes If the liner is in more than one length are the joints burned ✓ 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 ✓ Length of stern bush 58 1/2"
 Dia. of Tunnel shaft as per rule 12.695 Dia. of Crank shaft journals as per rule 13.330 Dia. of Crank pin 13 3/8" Size of Crank webs 20x8 3/4" Dia. of thrust shaft under
 collars 13 3/8" Dia. of screw 17-6" Pitch of screw 17-4 1/2" No. of blades 4 State whether moveable no Total surface 95 sq ft
 No. of Feed pumps Two Diameter of ditto 3 1/2" Stroke 30" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 4" Stroke 30" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Two Sizes of Pumps 12x10 D.A. + 4x8 Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Four - 3 1/2" In Holds, &c. No. 1 hold two - 3 1/2"; No. 2 hold two - 3 1/2";
No. 3 hold two - 3 1/2"; No. 4 hold two - 3 1/2"; tunnel well one - 2 1/2".
 No. of bilge injections one sizes 6" Connected to condenser, or to circulating pump Cir. p. Is a separate donkey suction fitted in Engine room & size Yes - 3 1/2"
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible none
 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 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
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door Yes worked from Upper deck

BOILERS, &c.—No. of Certificate _____ (Letter for record _____) Total Heating Surface of Boilers 5588 sq ft Is forced draft fitted no
 No. and Description of Boilers _____ Working Pressure 180 lbs. Tested by hydraulic pressure to _____
 Date of test _____ Can each boiler be worked separately Yes Area of fire grate in each boiler 74.75 sq ft No. and Description of safety valves to
 each boiler Two, spring-loaded Area of each valve 8.29 sq in. Pressure to which they are adjusted 184 lbs. Are they fitted with easing gear Yes
 Smallest distance between boilers on uptakes and bunkers on woodwork 12" Mean dia. of boilers _____ Length _____ Material of shell plates _____
 Thickness _____ Range of tensile strength _____ Are they welded or flanged _____ Descrip. of riveting: cir. seams _____ long. seams _____
 Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
 Per centages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____
 Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
 Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
 Material of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____
 Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
 Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
 Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
 Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
 Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and
 thickness of girder at centre See Glasgow Report No. 12932 Length as per rule _____ Distance apart _____ Number and pitch of Stays in each _____
 Working pressure by rules _____ Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked
 separately _____ Diameter _____ Length _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet
 holes _____ Pitch of rivets _____ Working pressure of shell by rules _____ Diameter of flue _____ Material of flue plates _____ Thickness _____
 If stiffened with rings _____ Distance between rings _____ Working pressure by rules _____ End plates: Thickness _____ How stayed _____
 Working pressure of end plates _____ Area of safety valves to superheater _____ Are they fitted with easing gear _____

DONKEY BOILER— No. *One* Description *Multitubular*
 Made at *Glasgow* By whom made *Barday, Curle & Co.* Date of test _____ Where fixed *On deck*
 Working pressure *80 lbs.* tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area *29.2 sq* Description of safety valves *Spring-loaded*
 No. of safety valves *Two* Area of each *5.94 sq* Pressure to which they are adjusted *80 lbs.* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No.* Dia. of donkey boiler *10'-0"* Length *9'-0"* Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____ Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
 Lap of plating _____ Per centage of strength of joints _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays to do. _____
 Dia. of stays _____ Diameter of furnace _____ Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____
 Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

Glasgow Report No. 15

SPARE GEAR. State the articles supplied:— *one cast iron propeller, 2 top end, 2 bott. end, 2 main bearing, 12 shaft coupling, 6 holding down, 6 junk ring, 6 cyl. cover + 6 valve chest cover, bolts + nuts, 2 feed + 2 bilge pump, valves, 3 cyl. escape valves + springs, one set of main feed check, one set air p. + one set of air pump, valves, 1 set safety valves springs, 12 B. tubes, 50 condenser tubes + 120 ferrules, 1 feed escape valves + spring, 24 main B. + 12 D. B. gauge glasses and rings, 12 manhole door joints, 1/2 set main firebars*
 The foregoing is a correct description,
John G. McEaid & Co. Manufacturer.

Dates of Survey while building
 During progress of work in shops - 1905 June 20. Nov 28. 29. 30. Dec 1. 4. 5. 6. 8. 11. 12. 13. 14. 15. 18. 19. 20. 22. 25. 1906 Jan 9. 10
 During erection on board vessel - 11. 12. 16. 18. 19. 23. 24. 25. 29. 30. 31. Feb 1. 3. 5. 6. 8. 9. 10. 12. 14. 15. 16. 17. 19. 20. 21. 24. 26. 27. 28. Mar 3. 5. 8. 9.
 Total No. of visits *April 30.* *56.* Is the approved plan of main boiler forwarded herewith *Not received*
 " " " donkey " " " *Not received*

General Remarks (State quality of workmanship, opinions as to class, &c. *Workmanship and material good.*)
The engines and Boilers have been built under special survey. They have been efficiently fitted on board and on trial, under full pressure, worked satisfactorily. The main steam pipes were tested to 360 lbs. hyd. pressure and found tight. The engines and Boilers are now in safe working condition and eligible, in my opinion, for notation + L.M.C. 4.06. in the Register Book.

Marks on Main B.
 No. 7896
 360 lbs.
 19/2/06. A.M.K.
 Marks on D. B.
 No. 7062
 160 lbs.
 17/8/05 J.L.J.

Report to be called out

It is submitted that this vessel is eligible for THE RECORD **L.M.C. 4.06.**

R.S.
 15.5.06
R.S.
 15.5.06

Greenock

Certificate (if retained) to be sent to the Committee's Minute.

The amount of Entry Fee...
 Special £ 25. 3
 Donkey Boiler Fee £ 12. 11
 Travelling Expenses (if any) £ 40. 15
 When applied for, 3/5/1906
 When received, 5/5/06

R. Elliott.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *Glasgow - 8 MAY 1906*

Assigned *+ L.M.C. 4.06.*

MACHINERY CERTIFICATE WRITTEN 9.506



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