

REPORT ON MACHINERY.

Port of *Glasgow*

FRI. 25 NOV 1893

Received at London Office

Survey held at *Glasgow*
Book. *Supp.*Date, first Survey *31 January*Last Survey *22 November 1898*(Number of Visits *49*)on the *Steel Screw Steamer "Luddick"*Tons ^{Gross}
_{Net}er *Clark*Built at *Warrington*By whom built *R. Williamson & Son*When built *1898-10*nes made at *Glasgow*By whom made *Ross & Duncan*when made *1898*rs made at *Glasgow*By whom made *Ross & Duncan*when made *1898*

stered Horse Power

Owners *Aberdeen, Newcastle & Hull Steam Co.*Port belonging to *Aberdeen*Horse Power as per Section 28 *94*Is Electric Light fitted *No*INES, &c.—Description of Engines *Compound*No. of Cylinders *Two*No. of Cranks *Two*eter of Cylinders *21"-42"* Length of Stroke *30"* Revolutions per minute *100* Diameter of Screw shaft *as per rule 8.56*
*as fitted 8.4"*eter of Tunnel shaft *as per rule 8.4"* Diameter of Crank shaft journals *8.4"* Diameter of Crank pin *8.4"* Size of Crank webs *15.2" x 5.2"*
*as fitted 8.4"*er of screw *9.9"* Pitch of screw *12.9"* No. of blades *4* State whether moveable *No* Total surface *25.9 sq ft*f Feed pumps *2* Diameter of ditto *3.4"* Stroke *15"* Can one be overhauled while the other is at work *Yes*f Bilge pumps *2* Diameter of ditto *3.2"* Stroke *15"* Can one be overhauled while the other is at work *Yes*f Donkey Engines *Two* Sizes of Pumps *(6.4 x 6) (5.4 x 4.2 x 5)* No. and size of Suctions connected to both Bilge and Donkey pumpsngine Room *Two: 2" dia.* In Hold, &c. *Two: 2" dia.*f bilge injections *1* sizes *4"* Connected to condenser, or to circulating pump *C.P.* Is a separate donkey suction fitted in Engine room & size *Yes: 2.2"*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 *✓*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*Are pipes 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*Were stern tube, propeller, screw shaft, and all connections examined in dry dock *Now vessel* Is the screw shaft tunnel watertight *None*Is it fitted with a watertight door *✓* worked from *✓*ERS, &c.— (Letter for record *\$*) Total Heating Surface of Boilers *1725 sq ft* Is forced draft fitted *No*and Description of Boilers *one: by 10" Mull? Single ended* Working Pressure *115 lbs* Tested by hydraulic pressure to *230 lbs*of test *5/10/98* Can each boiler be worked separately *✓* Area of fire grate in each boiler *56 sq ft* No. and Description of safety valves toboiler *Two: Direct Spring* Area of each valve *8.29"* Pressure to which they are adjusted *120 lbs* Are they fittedusing gear *Yes* Smallest distance between ^{boilers} or uptakes and bunkers or woodwork *About 9"* Mean diameter of boilers *13.6"*Material of shell plates *Steel* Thickness *1.5"* Description of riveting: circum. seams *Lap double* long. seams *Double Butt Sharp*Diameter of rivet holes in long. seams *1.5"* Pitch of rivets *3"* ^{2 Rows} *6"* Lap of plates or width of butt straps *14.2" x 1.5"*Mountings of strength of longitudinal joint ⁸⁴ rivets *84* Working pressure of shell by rules *120 lbs* Size of manhole in shell *15" x 11.2"*Compensating ring *6" x 1.5"* No. and Description of Furnaces in each boiler *3: plain* Material *Steel* Outside diameter *42"*of plain part ^{top} *6.8"* Thickness of plates ^{crown} *1.5"* Description of longitudinal joint *Welded* No. of strengthening rings *partial at bottom*Working pressure of furnace by the rules *120 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"* Back *1/2"* Top *1/2"* Bottom *1/2"*of stays to ditto: Sides *8" x 8"* Back *8" x 8"* Top *8" x 8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *120 lbs*Material of stays *Steel* Diameter at smallest part *1.5"* Area supported by each stay *64"* Working pressure by rules *120 lbs* End plates in steam space:Material *Steel* Thickness *1/8"* Pitch of stays *14.2" x 14.2"* How are stays secured *Double nut & washers* Working pressure by rules *118 lbs* Material of stays *Steel*Diameter at smallest part *2.5"* Area supported by each stay *305"* Working pressure by rules *120 lbs* Material of Front plates at bottom *Steel*Material of Lower back plate *Steel* Thickness *1/8"* Greatest pitch of stays *15"* Working pressure of plate by rules *180 lbs*Diameter of tubes *3.2"* Pitch of tubes *4.2" x 4.2"* Material of tube plates *Steel* Thickness: Front *1/16"* Back *1/16"* Mean pitch of stays *12.6"*across wide water spaces *14.2"* Working pressures by rules *150 lbs approx* Girders to Chamber tops: Material *Iron* Depth andMass of girder at centre *6.2" x 1.2"* Length as per rule *28.2"* Distance apart *8"* Number and pitch of Stays in each *2: 8"*Working pressure by rules *122 lbs* Superheater or Steam chest; ~~how connected to boiler~~ *None* Can the superheater be shut off and the boiler worked

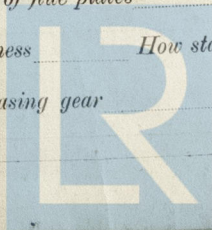
Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

ened 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

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



© 2021

Lloyd's Register
Foundation

DONKEY BOILER— Description *Vertical with 2 cross water tubes.*
 Made at *Monmouth*. By whom made *J Marshall & Co* When made *2/1898* Where fixed *In Stoke Newington*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *449* Fire grate area *10* Description of safety valves *One*
 No. of safety valves *1* Area of each *4.9* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *Yes* If steam from main boiler
 enter the donkey boiler *No* Diameter of donkey boiler *4.6* Length *9.0* Material of shell plates *Steel* Thickness *1/2*
 Description of riveting long seams *Lap double* Diameter of rivet holes *1/4* Whether punched or drilled *Punched* Pitch of rivets *2*
 Lap of plating *3/4* Per centage of strength of joint Rivets *85-8* Thickness of shell crown plates *1/2* Radius of do. *4.6* No. of Stays to do. *15*
 Dia. of stays *1 1/2* Diameter of furnace Top *3.10* Bottom *4.0* Length of furnace *4.2* Thickness of furnace plates *1/2* Description
 joint *Lap* Thickness of furnace crown plates *1/2* Stayed by *Same as shell crown* Working pressure of shell by rules *10*
 Working pressure of furnace by rules *96 lbs* Diameter of uptake *10* Thickness of uptake plates *1/16* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *Propeller, 2 main Bearing Bolts, 2 Crank Bolts, 2 Crosshead Bolts, 1 set Coupling Bolts, 1 set piston pins, 1 set of Belts pump valves, Bolts, nuts & Iron spacers & pins.*

The foregoing is a correct description,
 Manufacturer. *Ross & Duncanson*
17 Buchanan

Dates of Survey { During progress of work in shops - 1898: Jan. 31 Feb. 4, 21, 28. Mar. 15, 25, 31. Apr. 6, 8, 19, 20, 27. May. 4, 11, 20, 24, 27. June. 13, 16, 23, 30.
 while building { During erection on board vessel - Aug. 3, 13, 22, 26. Sept. 2, 16, 23. Oct. 3, 5, 6, 13, 24, 28, 31. Nov. 2, 3, 4, 5, 7, 8, 9, 11, 12, 14, 15, 19, 22.
 Total No. of visits *49*

General Remarks (State quality of workmanship, opinions as to class, &c.)
ENGINES—Length of stern bush *34 1/2* Diameter of crank shaft journals *8.15* as per rule. *8.4* as fitted. Diameter of thrust shaft under collars *8 1/4*
BOILERS—Range of tensile strength *27-32 tons* Are they welded or flanged *No* **DONKEY BOILERS**—No. *1* Range of tensile strength *27*
 Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith *Yes*

The Engines and Boilers of this vessel have been built under Special Survey and the materials and workmanship are good. When completed they were examined under steam on a full speed trial and the full and worked satisfactorily.

The Machinery is now in good and efficient condition and eligible in my opinion to have the record ☒ L.M.C. 11,98. inserted in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. ☒ L.M.C. 11.98.

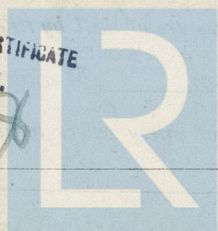
A.C.H.
25. 11. 98.
25. 11. 98

The amount of Entry Fee. £ *1* : : : When applied for, *22. 11. 18. 98*
 Special £ *14* : *11* : : :
 Donkey Boiler Fee £ : : : When received, *24. 11. 18. 98*
 Travelling Expenses (if any) £ *1* : : :
(Due to Barrow)

Committee's Minute
 Assigned

FRI. 25 NOV 1898

Wm. Austin.
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships



© 2021
 Lloyd's Register
 Foundation

Barrow

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)