

# REPORT ON MACHINERY.

Port of Glasgow

Received at London Office **MUN 14 NOV 1898**

No. in Survey held at Glasgow & Leith. Date, first Survey 8 February Last Survey 6 August 1898  
Reg. Book. 692 on the Screen Steamer Simpson. at Leith 29th August Number of Visits 33 5th Nov 1898

Master By whom built Cumming & Ellis. When built 1898.  
Engines made at Glasgow. By whom made Hudson & Son when made 1898.  
Milers made at Glasgow. By whom made Anderson & Spall when made 1898.  
Registered Horse Power 75 Owners Munhead Trawlers Lim. Port belonging to Ganton  
(Munhead's manager)  
Nom. Horse Power as per Section 28 40.86. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Compound surface condensing. No. of Cylinders Two. No. of Cranks Two.

Diameter of Cylinders 21"-22" Length of Stroke 24" Revolutions per minute 70 Diameter of Screw shaft as per rule 7.6"  
Diameter of Tunnel shaft as per rule 6.8" Diameter of Crank shaft journals 4 5/8" Diameter of Crank pin 4 5/8" Size of Crank webs 11 1/4" x 5 1/4" built  
Diameter of screw 9' 3" Pitch of screw 14.6" No. of blades 4. State whether moveable No. Total surface 32 sq. feet.  
No. of Feed pumps one. Diameter of ditto 2 3/4" Stroke 24" Can one be overhauled while the other is at work ✓  
No. of Bilge pumps one. Diameter of ditto 2 3/4" Stroke 24" Can one be overhauled while the other is at work ✓  
No. of Donkey Engines one. Sizes of Pumps 5 1/2" x 3 1/2" x 7" No. and size of Suctions connected to both Bilge and Donkey pumps  
Engine Room one 2' d. In Holds, &c. one 2' d.

No. of bilge injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size Yes: 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 Section to hold How are they protected Wood casing  
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 new vessel Is the screw shaft tunnel watertight none  
Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record \$.) Total Heating Surface of Boilers 1598 sq. ft. Is forced draft fitted No.

No. and Description of Boilers one: cylind. Mult. Single Ended. Working Pressure 110 lbs. Tested by hydraulic pressure to 220 lbs.  
Date of test 9/8/98. Can each boiler be worked separately ✓ Area of fire grate in each boiler 54 sq. ft. No. and Description of safety valves to  
each boiler Two: Direct Spring. Area of each valve 8.29" Pressure to which they are adjusted 115 lbs Are they fitted  
with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean diameter of boilers 13.3"  
Length 11' 0" Material of shell plates Steel Thickness 3/4" Description of riveting: circum. seams Lap Double long. seams D'ble Butt Straps  
Diameter of rivet holes in long. seams 15" Pitch of rivets 4 3/32" 2 28/32" Lap of plates or width of butt straps 9 3/4"  
Percentages of strength of longitudinal joint  
rivets 84 Working pressure of shell by rules 115 lbs. Size of manhole in shell 16" x 12"  
plate 81  
Length of compensating ring 28 1/2" x 24 1/2" x 7 1/2" No. and Description of Furnaces in each boiler 3: plain Material Steel Outside diameter 40"  
Length of plain part top 7' 0" Thickness of plates crown 2 19/32" Description of longitudinal joint Welded No. of strengthening rings partial at bottom  
bottom 9' 10" Working pressure of furnace by the rules 114 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 3/2" Top 1/2" Bottom 1/2"  
Pitch of stays to ditto: Sides 8' x 8" Back 8 7/16" x 8 3/16" Top 7 1/4" x 8 1/4" 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 1/4" Area supported by each stay 69" Working pressure by rules 138 lbs. End plates in steam space:  
Material Steel Thickness 3/8" Pitch of stays 18" x 18 1/4" How are stays secured D'ble nuts & washers Working pressure by rules 111 lbs. Material of stays Steel  
Diameter at smallest part 2 3/8" Area supported by each stay 328" Working pressure by rules 131 lbs. Material of Front plates at bottom Steel  
Thickness 1/16" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 12" Working pressure of plate by rules 142 lbs.  
Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates Steel Thickness: Front 3/8" Back 1/16" Mean pitch of stays 11 7/8"  
Pitch across wide water spaces 14 1/2" Working pressures by rules 130 lbs. 120 lbs. Girders to Chamber tops: Material Steel Depth and  
thickness of girder at centre 7 3/4" x 1 5/8" Length as per rule 35 1/4" Distance apart 7 3/4" Number and pitch of Stays in each 3: 8 1/4"  
Working pressure by rules 118 lbs. Superheater or Steam chest; how connected to boiler none 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**— Description *None*  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
 Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_  
 No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers enter the donkey boiler \_\_\_\_\_  
 Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
 Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ 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 \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— *As per Rules*

The foregoing is a correct description,

Manufacturer.

*W. Adam & Son*

Dates of Survey while building } During progress of work in shops— 1898:— Feb. 8. 14. 21. 23. Mar. 7. 9. 14. 17. 21. 24. 29. 31. Apr. 6. 20. 27. May. 4. 5. 10. 11. 13. 20. 25. June 16. 21. 24. 27. July. 4. 12. 21. 28. Aug. 6. At Leith 1898. Aug. 29. 30. Sept. 25. Nov. 5.  
 Total No. of visits *33 + 4 = 37*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

**ENGINES**—Length of stern bush *32'* Diameter of crank shaft journals *as per rule 4 1/2"* Diameter of thrust shaft under collars *4 1/2"*  
**BOILERS**—Range of tensile strength *29-32 tons* Are they welded or flanged *No.* **DONKEY BOILERS**—No. \_\_\_\_\_ Range of tensile strength \_\_\_\_\_  
 Is the approved plan of main boiler forwarded herewith  Is the approved plan of donkey boiler forwarded herewith

The Engines and Boiler of this vessel have been built under special survey and the materials and workmanship are good. When completed they were reamined under steam and worked satisfactorily.

The machinery is now in good and efficient condition and reliable in our opinion to have the record of **L.M.C. 11, 98** marked 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.*

*16. 11. 98.*

*J.S.*  
*15. 11. 98*

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee, £ 1 : : When applied for.  
 Special .. .. £ 10 : 10 : 31. 8. 18. 98  
 Donkey Boiler Fee .. .. £ : : When received.  
 Travelling Expenses (if any) £ *at Leith.* : 7/6 : 15. 10. 18. 98

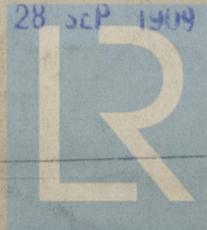
*Wm. Austin & Thomas Lee*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships  
 MACHINERY CERTIFICATE  
**TUES. 28 SEP 1909**

Committee's Minute

**TUES. 15 NOV 1898**

Assigned

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