

REPORT ON MACHINERY.

Port of Leith

Received at London Office SAIL 16 JUL 1898

No. in Survey held at Leith
Reg. Book.

Date, first Survey 14th April 1897 Last Survey 14th July 1898

(Number of Visits 47.48)

on the S.S. "Ronan"

Ton { Gross 1198.14
Net 505.61

Master A. I. M. Waddell Built at Leith

By whom built Ramage & Ferguson

When built 1898

Engines made at Leith

By whom made Ramage & Ferguson

when made 1898

Boilers made at do

By whom made do

when made 1898

Registered Horse Power 232

Owners J. Gibson & Co

Port belonging to Leith

Nom. Horse Power as per Section 28 232

ENGINES, &c. — Description of Engines Triple expansion on 3 cranks No. of Cylinders 3
 Diameter of Cylinders 21", 33" + 54" Length of Stroke 42" Revolutions per minute 90 Diameter of Screw shaft as per rule 10.5"
 Diameter of Tunnel shaft as per rule 9.97" Diameter of Crank shaft journals 11 1/2" Diameter of Crank pin 11 1/2" Size of Crank webs 18 1/2" x 8 1/2"
 Diameter of screw 14' 0" Pitch of screw 15' 6" No. of blades 4 State whether moveable yes Total surface 55 f
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 10" x 8" x 10" + 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room one 2 1/2" dia + two 2 1/4" dia. In Holds, &c. Two to each hold 2 1/4" dia.
 No. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 2 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 no
 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 Bilge suction to fore hold How are they protected Wood casings
 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 yes
 Is it fitted with a watertight door yes worked from Lop platform.

BOILERS, &c. — (Letter for record 3) Total Heating Surface of Boilers 4027.4 f
 No. and Description of Boilers Two, multitubular single ended Working Pressure 170 lbs Tested by hydraulic pressure to 340 lbs
 Date of test 26/8/97 Can each boiler be worked separately yes Area of fire grate in each boiler 65 f No. and Description of safety valves to each boiler Two, Spring
 Area of each valve 8.95" Pressure to which they are adjusted 170 lbs. Are they fitted with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 14' 0"
 Length 11' 6" Material of shell plates Steel Thickness 1 5/16" Description of riveting: circum. seams Lap, & Rivet long. seams D.B.S. J. Rivet
 Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9" Lap of plates or width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets 85- Working pressure of shell by rules 192 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring M. Heile No. and Description of Furnaces in each boiler 3 - Four Material Steel Outside diameter 41"
 Length of plain part top 17 1/32" Thickness of plates crown 17 1/32" Description of longitudinal joint Welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 199 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 9/16" Top 5/8" Bottom 7/8"
 Pitch of stays to ditto: Sides 8 1/2" Back 7 1/2" Top 7 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187 lbs
 Material of stays Steel Diameter at smallest part 1.450" Area supported by each stay 60" Working pressure by rules 193 lbs End plates in steam space:
 Material Steel Thickness 1 5/32" Pitch of stays 16 1/2" How are stays secured D. N. & W. Working pressure by rules 232 lbs Material of stays Steel
 Diameter at smallest part 5.050" Area supported by each stay 264" Working pressure by rules 172 lbs Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 12" Working pressure of plate by rules 184 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 1 3/16" Back 1 3/16" Mean pitch of stays 10 5/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 230 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10" x 1 3/4" Length as per rule 36" Distance apart 7 3/4" Number and pitch of Stays in each 3 - 7 3/4"
 Working pressure by rules 220 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 *vertical, see Newcastle report attached*
 Made at *Gallehead* By whom made *Clarke Chapman* When made *18.9.98* Where fixed *Stokehead*
 Working pressure *100lb* tested by hydraulic pressure to *200lb* No. of Certificate *5120* Fire grate area *32sq* Description of safety valves
 No. of safety valves *2* Area of each *404* Pressure to which they are adjusted *70lb* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* 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:—

The foregoing is a correct description,
Ramage & Ferguson, Limited. Manufacturer.

John Ramage

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

Dates of survey while building	During progress of work in shops—	1897. April 14. May 5. 10. 12. 27. 29. June 4. 23. 28. 30. July 7. 15. 23. 26. August 4. 9. 12. 16. 18. 31. Sept. 1. 3. 10. 16.
	During erection on board vessel—	Sept. 21. 27. October 11. 14. 18. 21. 25. Nov. 10. 15. 23. Dec. 1. 3. 6. 15. 22. Jan. 7. 13. 17. Feb. 17. 22. Mar. 10.
	Total No. of visits	July 11-14 48

The engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are found & good. The engines have been tried & the boiler safety valves adjusted under steam at the working pressures. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of **+ L.M.C. 5,98**. The approved boiler tracing is forwarded herewith.

The survey on the machinery of this vessel was completed in May with the exception of the safety valves & waste steam pipe which were too small & since that time the vessel has been running at a reduced pressure to prevent too much accumulation. Larger safety valves & waste steam pipe have now been fitted.

It is submitted that this vessel is eligible for **THE RECORD.** **+ L.M.C. 5,98**

TH
16/7/98

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

Certificate (if required) to be sent to _____

The amount of Entry Fee..	£ 2 :-	When applied for,	15 th July 98
Special	£ 31 : 12	When received,	19.7.98
Donkey Boiler Fee .. .	£ :		
Travelling Expenses (if any) £	:		

Thomas Field
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute _____
 Assigned _____ **+ L.M.C. 5,98**

TUES. 19 JUL 1898

MACHINERY CERTIFICATE
 WRITTEN.



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