

REPORT ON MACHINERY.

Port of Leith

Received at London Office 28 NOV 1898

No. in Survey held at Leith Date, first Survey 25th Jan. Last Survey 25th Nov. 1898
 Reg. Book. on the S. S. "Sifka" (Number of Visits 35)
 Master J. Polo 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 99 Owners J. L. Salvesen & Co Port belonging to Grangemouth
 Nom. Horse Power as per Section 28 111 115

ENGINES, &c.— Description of Engines Triple expansion No. of Cylinders 3
 Diameter of Cylinders 17 - 27 & 44" Length of Stroke 30 Revolutions per minute 95 Diameter of Screw shaft as per rule 8.38"
 Diameter of Tunnel shaft as per rule 7.54" Diameter of Crank shaft journals Rule 7.99" Diameter of Crank pin 8 1/2" Size of Crank webs 13 1/4" x 6"
 Diameter of screw 12' 0" Pitch of screw 13' 8" No. of blades 4 State whether moveable no Total surface 42.7 sq
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 15" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps 10 x 12 x 10 & 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Four 2" dr. In Holds, &c. Two to each hold 2" dr & one to tunnel well 2 1/2" dr.
 No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 2 1/4"
 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 new vessel Is the screw shaft/tunnel watertight yes
 Is it fitted with a watertight door yes worked from Top platform.

BOILERS, &c.— (Letter for record 3) Total Heating Surface of Boilers 175.7 sq
 No. and Description of Boilers One cylindrical single ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs
 Date of test 12-9-98 Can each boiler be worked separately ✓ Area of fire grate in each boiler 57 sq No. and Description of safety valves to each boiler Two, spring
 Area of each valve 7.07 sq Pressure to which they are adjusted 165 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers on woodwork 9" Mean diameter of boilers 14' 3"
 Length 10' 0" Material of shell plates Steel Thickness 1 1/8" Description of riveting: circum. seams Lap & Riv'd long. seams S. B. S. & Riv'd
 Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 18"
 Per centages of strength of longitudinal joint 86.1 Working pressure of shell by rules 168 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 3, Purvis Material Steel Outside diameter 43"
 Length of plain part top 1 1/2" Thickness of plates bottom 1 1/2" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 161 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"
 Pitch of stays to ditto: Sides 7 3/4" Back 7 3/4" Top 7 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lbs
 Material of stays Steel Diameter at smallest part 1.19" Area supported by each stay 60 sq Working pressure by rules 160 lbs End plates in steam space:
 Material Steel Thickness 15/16" Pitch of stays 16" How are stays secured S. B. & W. Working pressure by rules 162 lbs Material of stays Steel
 Diameter at smallest part 4.11" Area supported by each stay 25.6 sq Working pressure by rules 160 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 3/4" Working pressure of plate by rules 160 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 5/8" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 9 1/2"
 Pitch across wide water spaces 15 1/2" Working pressures by rules 210 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 3/4" x 13 1/4" Length as per rule 26" Distance apart 7 3/4" Number and pitch of Stays in each 2 - 7 3/4"
 Working pressure by rules 214 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 ✓
 Stays 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, Lync Patent.*
 Made at *Gateshead* By whom made *Clarke Chapman & Co* When made *15.8.98* Where fixed *Stockhold*
 Working pressure *75 lbs* tested by hydraulic pressure to *150 lbs* No. of Certificate *5343* Fire grate area *16 sq* Description of safety valves *Spring*
 No. of safety valves *one* Area of each *9.6 sq* Pressure to which they are adjusted *75 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *5' 9"* Length *13 ft* Material of shell plates *Steel* Thickness *3/8"*
 Description of riveting long. seams *S. R. Lap* Diameter of rivet holes *3/4"* Whether punched or drilled *drilled* Pitch of rivets *2 3/4"*
 Lap of plating *3 5/8"* Per centage of strength of joint Rivets *12.8* Thickness of shell crown plates *17/32"* Radius of do. *5 ft* No. of Stays to do. *4 gussets*
 Dia. of stays. *1 1/2"* Diameter of furnace Top *2' 2 3/4"* Bottom *11 3/4"* Length of furnace *4 ft* Thickness of furnace plates *17/32"* Description of joint *S. R. Lap* Thickness of *comb. cham* furnace crown plates *17/32"* Stayed by *tubes* Working pressure of shell by rules *82 lbs*
 Working pressure of furnace by rules *98 lbs* Diameter of uptake *15"* Thickness of uptake plates *7/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *As per Rules & in addition, a spare propeller, two safety valve springs, two escape valve springs, 12 boiler tubes & 6 condenser tubes.*

The foregoing is a correct description,
Ramage & Ferguson Ltd
Alex. J. Ferguson Manufacturer.

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

Dates of Survey while building
 During progress of work in shops— *1898. Jan 25. Apr 14. 22. 28. May 4. 13. 18. 24. 30. June 22. 29. July 8. 11. 21. 26. 28. Aug. 3. 10. 12. 20.*
 During erection on board vessel— *Oct. 19. 27. 31. Nov. 8. 14. 25.*
 Total No. of visits *35*

The engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are found & good. The engines have been tried under steam & the safety valves of main & donkey boilers adjusted under steam at their working pressures.

The machinery is now in good & safe working condition & eligible in my opinion to ~~be~~ to have the notation of *L.M.C. 11.98.*

The approved boiler tracings are forwarded herewith.

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

A.C.H.
[Signature]
 28.11.98

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,
Special	£ 16	: 16	: -	26.11.98
Donkey Boiler Fee	£ -	: -	: -	When received,
Travelling Expenses (if any)	£ -	: -	: -	2-12-98

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

Committee's Minute

MACHINERY CERTIFICATE WRITTEN
 10ES. 29 NOV 1898

Assigned

+ L.M.C. 11.98