

YACHT. REPORT ON MACHINERY.

NO. 805
463022

Port of Leith

No. in Survey held at Leith

Reg. Book

Date, first Survey 15th July 1895 Last Survey 20th May 1896

Received at London Office

THUR. APR 18 1896

on the S. Y. "Solaise"

(Number of Vistas 41)

Master W. C. Wolfe Built at Leith

By whom built Ramage & Ferguson

Tons { Gross 538.55
Net 227.09

Engines made at Leith

By whom made Ramage & Ferguson

when made 1896

Boilers made at do

By whom made do

when made 1896

Registered Horse Power 140

Owners Sir Donald Currie

Port belonging to London

Nom. Horse Power as per Section 28 143

ENGINES, &c.

Description of Engines

Triple expansion on three cranks

No. of Cylinders 3

Diameter of Cylinders 18"-29 1/2"-48"

Length of Stroke 33"

Revolutions per minute 100

Diameter of Screw shaft

as per rule 8.8"

Diameter of Tunnel shaft

as fitted 9 3/4"

Diameter of Crank shaft journals 9 1/4"

Diameter of Crank pin 9 1/4"

Size of Crank webs 9 3/4" x 6 3/4"

Diameter of screw 11' 3"

Pitch of screw 14' 0"

No. of blades 4

State whether moveable no

Total surface 32 f

No. of Feed pumps 2

Diameter of ditto 2 1/2"

Stroke 15 1/2"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 15 1/2"

Can one be overhauled while the other is at work yes

No. of Donkey Engines 2

Sizes of Pumps 7 x 4 1/2 x 7" + 3 1/2 x 2 1/2 x 4"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room one 2 1/2" dia

In Holds, &c. one to fore hold, one to main

hold + one to after hold, all 2 1/2" dia

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 1/2"

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 Below

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 Suctions 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 bulkhead

Is it fitted with a watertight door yes

worked from top platform

BOILERS, &c.

(Letter for record BA)

Total Heating Surface of Boilers 2295 f

No. and Description of Boilers one cylindrical single ended

Working Pressure 170 lbs

Tested by hydraulic pressure to 340 lbs

Date of test 1-11-95

Can each boiler be worked separately yes

Area of fire grate in each boiler 76.6 f

No. and Description of safety valves to each boiler Two, spring

with easing gear yes

Smallest distance between boilers or uptakes and bunkers on woodwork

Pressure to which they are adjusted 170 lbs

Are they fitted yes

Length 10' 5"

Material of shell plates Steel

Thickness 5/16"

Description of riveting: circum. seams Lap S. Rivd

long. seams S.B.S. Y. Rivd

Diameter of rivet holes in long. seams 1 5/16"

Pitch of rivets 9 1/2"

Lap of plates or width of butt straps 19 3/4"

Per centages of strength of longitudinal joint 84

Working pressure of shell by rules 171 lbs

Size of manhole in end 16" x 12"

Size of compensating ring McNeil

Length of plain part top bottom

Thickness of plates top bottom

Description of longitudinal joint welded

No. of strengthening rings yes

Working pressure of furnace by the rules 193 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 19/32"

Back 5/8"

Top 19/32"

Bottom 3/4"

Pitch of stays to ditto: Sides 8 1/4"

Back 8 1/2"

Top 8"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 179 lbs

Material of stays Iron

Diameter at smallest part 2.032"

Area supported by each stay 70.1 a"

Working pressure by rules 217 lbs

End plates in steam space: yes

Material Steel

Thickness 1 1/2"

Pitch of stays 16"

How are stays secured nuts

Working pressure by rules 170 lbs

Material of stays Iron

Diameter at smallest part 6.412"

Area supported by each stay 240 a"

Working pressure by rules 202 lbs

Material of Front plates at bottom Steel

Thickness 3/4"

Material of Lower back plate Steel

Thickness 3/4"

Greatest pitch of stays 14"

Working pressure of plate by rules 198 lbs

Working pressure by rules 198 lbs

Mean pitch of stays 9 7/8"

Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" x 4 1/2"

Material of tube plates Steel

Thickness: Front 3/4"

Back 3/4"

Mean pitch of stays 9 7/8"

Pitch across wide water spaces 14"

Working pressures by rules 231 lbs

Girders to Chamber tops: Material Iron

Depth and thickness of girder at centre 7 1/2" x 1 1/2"

Length as per rule 26 1/2"

Distance apart 8"

Number and pitch of Stays in each 2-7 3/4"

Working pressure by rules 190 lbs

Superheater or Steam chest; how connected to boiler none

Can the superheater be shut off and the boiler worked separately yes

Diameter yes

Length yes

Thickness of shell plates yes

Material yes

Description of longitudinal joint yes

Diam. of rivet holes yes

Pitch of rivets yes

Working pressure of shell by rules yes

Diameter of flue yes

Material of flue plates yes

Thickness yes

How stayed yes

Working pressure of end plates yes

Area of safety valves to superheater yes

Are they fitted with easing gear yes

Working pressure by rules yes

End plates: Thickness yes

How stayed yes

Working pressure of end plates yes

Area of safety valves to superheater yes

Are they fitted with easing gear yes

Working pressure by rules yes

End plates: Thickness yes

How stayed yes

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Are they fitted with easing gear yes

Working pressure by rules yes

End plates: Thickness yes

How stayed yes

Working pressure of end plates yes

Area of safety valves to superheater yes

Are they fitted with easing gear yes

Working pressure by rules yes

DONKEY BOILER— Description *vertical with two cross tubes*
 Made at *Yateshead* By whom made *Clarke Chapman & Co* When made *27-9-95* Where fixed *Stokehold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *4674* Fire grate area *8 1/4* Description of safety valves *Spring*
 No. of safety valves *one* Area of each *4.92* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *yes* If steam from main boilers
 enter the donkey boiler *no* Diameter of donkey boiler *4 ft* Length *9' 3"* Material of shell/plates *steel* Thickness *3/8"*
 Description of riveting long. seams *Lap. & Rivd* 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 *72.5* Thickness of shell crown plates *1/2"* Radius of do. *5 ft* No. of Stays to do. *3*
 Dia. of stays. *1 1/2"* Diameter of furnace Top *2' 11 3/8"* Bottom *3' 5"* Length of furnace *4 ft* Thickness of furnace plates *1/2"* Description of
 joint *Lap & Rivd* Thickness of furnace crown plates *1/2"* Stayed by *as above* Working pressure of shell by rules *111 lbs*
 Working pressure of furnace by rules *104 lbs* Diameter of uptake *12"* Thickness of uptake plates *1/2"* Thickness of water tubes *7/16"*

SPARE GEAR. State the articles supplied:— *As per Rule & in addition a set of safety
 & escape valve springs, a pair of crank pin bushes, & 12 condenser tubes*

The foregoing is a correct description,
John. J. Ramage Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel
 have been constructed under special survey & the materials & workmanship
 are found & good. The engines have been tried & the safety valves of
 main & donkey boilers 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 + LMC 3.96
 The boiler tracings are forwarded herewith.*

*It is submitted that
 this vessel is eligible for
 THE RECORD.* + L.M.C. 3.96.

J.S.
9.4.96

Pms.
9.4.96

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special	£ 21	:	9	- 6.4.18.96
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	8.4.18.96

Committee's Minute **TUES. APR 14 1896**

Assigned

+ LMC 3.96

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



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