

## REPORT ON MACHINERY.

Port of *Leith*

TUES. MAY 26 1896

No. in Survey held at *Leith*  
Reg. Book.Date, first Survey *4<sup>th</sup> February* Last Survey *15<sup>th</sup> May* 1896

Received at London Office

13

on the *S. K. "Kellie Castle"*(Number of Visits *21*)Tons *Gross 114.42*  
*Net 22.07*When built *1896*Master *Leith* Built at *Leith* By whom built *Hawthornes & Co*Engines made at *Leith* By whom made *Hawthornes & Co* when made *1896*Boilers made at *Do* By whom made *Do* when made *1896*Registered Horse Power *34* Owners *Castle Steam Fishing Co (Lim)* Port belonging to *Kirkcaldy*Nom. Horse Power as per Section 28 *41.*

ENGINES, &c.— Description of Engines *Compound, inverted.* No. of Cylinders *2*  
 Diameter of Cylinders *14" + 29"* Length of Stroke *21"* Revolutions per minute *125* Diameter of Screw shaft *as per rule 5.7"*  
 Diameter of Tunnel shaft *as per rule 5.41"* Diameter of Crank shaft journals *6"* Diameter of Crank pin *6"* Size of Crank webs *11" + 4 1/4"*  
 Diameter of screw *6' 9"* Pitch of screw *9' 10 1/2"* No. of blades *4* State whether moveable *no* Total surface *18 sq*  
 No. of Feed pumps *1* Diameter of ditto *2 1/8"* Stroke *11"* Can one be overhauled while the other is at work ☒  
 No. of Bilge pumps *1* Diameter of ditto *2 1/8"* Stroke *11"* Can one be overhauled while the other is at work ☒  
 No. of Donkey Engines *One* Sizes of Pumps *4 1/2" x 2 1/2" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room *Two 2" dial & ejector 2" dial.* In Holds, &c. *One 2" dial & ejector 2" dial.*  
 No. of bilge injections *1* sizes *3 1/4"* Connected to condenser, or to circulating pump *yes* 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 *Bilge suction to hold* How are they protected *By 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 *S*) Total Heating Surface of Boilers *745 sq*  
 and Description of Boilers *One cylindrical single ended* Working Pressure *120 lbs* Tested by hydraulic pressure to *240 lbs*  
 Date of test *24.4.96* Can each boiler be worked separately ☒ Area of fire grate in each boiler *29 sq* No. and Description of safety valves to  
 each boiler *Two, direct spring* Area of each valve *3.97 sq* Pressure to which they are adjusted *120 lbs* Are they fitted  
 with casing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *8"* Mean diameter of boilers *9' 5 15/32"*  
 Length *9' 3"* Material of shell plates *Steel* Thickness *35/32* Description of riveting: circum. seams *Lap. S. Rivet* long. seams *Lap. S. Rivet*  
 Diameter of rivet holes in long. seams *1 3/32* Pitch of rivets *4"* Lap of plates or width of butt straps *7 3/8"*  
 Percentages of strength of longitudinal joint *76.5* Working pressure of shell by rules *124 lbs* Size of manhole in shell *16" x 12"*  
 of compensating ring *McNeil* No. and Description of Furnaces in each boiler *2, plain* Material *Steel* Outside diameter *33 3/32"*  
 Thickness of plates *35/32* Description of longitudinal joint *Welded* No. of strengthening rings *None*  
 Working pressure of furnace by the rules *127 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"* Back *1/2"* Top *1/2"* Bottom *5/8"*  
 of stays to ditto: Sides *8"* Back *8"* Top *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 *1.19"* Area supported by each stay *64 sq* Working pressure by rules *148 lbs* End plates in steam space:  
 Material *Steel* Thickness *3/4"* Pitch of stays *14 1/2"* How are stays secured *S. N. + W.* Working pressure by rules *127 lbs* Material of stays *Steel*  
 Diameter at smallest part *3.43"* Area supported by each stay *196 sq* Working pressure by rules *157 lbs* Material of Front plates at bottom *Steel*  
 Thickness *3/4"* Material of Lower back plate *Steel* Thickness *3/4"* Greatest pitch of stays *13" 1/2" doubling* Working pressure of plate by rules *151 lbs*  
 Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2"* Material of tube plates *Steel* Thickness: Front *3/4"* Back *3/4"* Mean pitch of stays *9"*  
 across wide water spaces *14" 1/2" doubling* Working pressures by rules *183 lbs* Girders to Chamber tops: Material *Steel* Depth and  
 weight of girder at centre *5" x 1 1/2"* Length as per rule *1' 11"* Distance apart *7 1/2"* Number and pitch of Stays in each *2, 8"*  
 Working pressure by rules *143 lbs* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked  
 safely ☒ 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 ☒  
 Fitted 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 casing 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 can  
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 Rule*

The foregoing is a correct description,

Manufacturer

HAWTHORNS & CO. LIMITED.

*James Hardman*

DIRECTOR

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey & the material & workmanship are found to be good. The engines have been tried under steam & the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of +LMC 5,96. The approved boiler tracing is forwarded herewith.*

*It is submitted that  
this vessel is eligible for  
THE RECORD.*

*+LMC 5.96*

*G.S.*

*26.5.96*

*Engl*

*26.5.96*

Certificate (if required) to be sent to

The amount of Entry Fee.. £ 1 : - : - When applied for,  
Special .. .. £ 8 : - : - 23.5.18.96  
Donkey Boiler Fee .. .. £ - : - : - When received,  
Travelling Expenses (if any) £ - : - : - 26.5.96

Committee's Minute

FRI, MAY 29 1896

MACHINE WRITTEN

FRI, JUN 19 1896

Assigned

*+LMC 5,96*

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



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Lloyd's Register  
Foundation

Signal

Office

102

No., Date

Whether Foreign

British

Number of

Number of

Rigged

Stern

Build

Galleries

Head

Framework

vessel

Number of

Number of

and their

Total to qu

at side am

No. of

Engines

Two

Number

Iron or S

Pressure

Under Tonnage

Closed-in spaces

Space or space

Poop

Forecastle

Round House

Other closed-

Spaces

+ Air

Gross

Deductions, as per

Register

Name of M

No. of Owners

Name, Residence,

The

Dated

28

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