

REPORT ON MACHINERY.

Port of *Leith*

TUES. MAY 26 1896

Received at London Office

No. in Survey held at *Leith*

Date, first Survey *4th February* Last Survey *15th May* 1896

Reg. Book. on the *S. K. "Kellie Castle"*

(Number of Visits *21*)

Tons { Gross *114.42*
Net *22.07*

Master Built at *Leith* By whom built *Hawthorns & Co*

When built *1896*

Engines made at *Leith* By whom made *Hawthorns & 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*

Tom. 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"*
as fitted *6"*

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" x 4 1/4"*
as fitted *5 3/4"*

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 25/32"*

Length *9' 3"* (Material of shell plates *Steel* Thickness *35/32* Description of riveting: circum. seams *Lap & Rivet* long. seams *Lap & 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 rivets *76.5* Working pressure of shell by rules *124 lbs* Size of manhole in shell *16" x 12"*
plate *72.5*

Material of compensating ring *McNeil's* No. and Description of Furnaces in each boiler *2, plain* Material *Steel* Outside diameter *33 3/32"*

Length of plain part top *6' 4"* Thickness of plates crown *35"* Description of longitudinal joint *Welded* No. of strengthening rings *None*
bottom *6' 4"* bottom *6' 4"*

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"*

Material 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*

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"*

Working pressures across wide water spaces *14" 1/2" doubling* Working pressures by rules *183 lbs* Girders to Chamber tops: Material *Steel* Depth and

Thickness 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

separately 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

Reinforced 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*

HAWTHORNS & CO. LIMITED.

The foregoing is a correct description,

Manufacturer

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 & 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

Imp

26.5.96

W. J. Field

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

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

Committee's Minute

FRI, MAY 29 1896

MACHINE WRITTEN

FRI, JUN 19 1896

Assigned

+LMC 5,96



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Lloyd's Register Foundation

*** The 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 quarter at side and

No. of Engines

Two

Number of Iron or Steel Pressure

Under Tonnage

Closed-in spaces

Space or space

Poop

Forecastle

Round House

Other closed-spaces

Spaces

+ Air

Gross

Deductions, as per Register

Name of Master

No. of Owners

Name, Residence,

The

Dated 28

& L (439w)-55420-10