

# REPORT ON MACHINERY.

Port of Leith

MON. JUN 8 1896

No. in Survey held at Leith Date, first Survey 19<sup>th</sup> Feb Last Survey 1<sup>st</sup> June 1896  
 Reg. Book. on the S. K. "Isle of May" (Number of Visits 21)  
 Master Leith Built at Leith By whom built Hawthorne & Co Tons { Gross 114.42  
 Engines made at Leith By whom made Hawthorne & Co when made 1896 Net 22.07  
 Boilers made at Do By whom made Do when made 1896  
 Registered Horse Power 34 Owners Anstruther Steam Fishing Co Ltd 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 fitted 5.34" Diameter of Crank shaft journals 6" Diameter of Crank pin 6" Size of Crank webs 11 x 4 1/2"  
 Diameter of screw 6' 9" Pitch of screw 9' 10 1/2" No. of blades 4 State whether moveable No Total surface 18 f  
 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 1/8" x 2 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Two, 2" dia. & ejector 2" dia. In Holds, &c. One 2" dia. & ejector 2" dia.  
 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" dia.  
 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 ✓

OILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 745 f  
 No. and Description of Boilers One, cylindrical single ended Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs  
 Date of test 9-5-96 Can each boiler be worked separately ✓ Area of fire grate in each boiler 29 f 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 easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean diameter of boilers 9' 5 1/2"  
 length 9' 3" Material of shell plates Steel Thickness 25/32" 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"  
 Size of compensating ring McNeill No. and Description of Furnaces in each boiler 2, plain Material Steel Outside diameter 33 3/32"  
 length of plain part top 6.4 ft Thickness of plates crown 35/64" 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"  
 Pitch 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 3.432" 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"  
 pitch 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 rivets  
✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓  
 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 ✓

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LTH566-0049



**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 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.

**General Remarks** (State quality of workmanship, opinions as to class, &c. The engines & boiler 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 at the working pressure. The machinery now in good & safe working condition & eligible in my opinion to have the notation of + LMC 6,96. The boiler tracing is forwarded herewith.

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

L.M.C. 6.96.

L.S.  
22.6.96

Eng.  
22.6.96

*[Large blue signature]*

Certificate (if required) to be sent to

The amount of Entry Fee..	£ / :-	When applied for,
Special .. .. .	£ 8 :-	<u>22/6/96</u>
Donkey Boiler Fee .. .. .	£ ✓ :-	When received,
Travelling Expenses (if any) £	✓ :-	<u>22/6/96</u>

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

Committee's Minute

FRI JUN 19 1896

TUES. JUN 23 1896

Assigned

+ LMC 6.96



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Dated 9th

& L (439W)—55420