

# REPORT ON MACHINERY.

Port of Leith

MUN 6 DEC 1897

Received at London Office 18

No. in Survey held at Leith Date, first Survey 9<sup>th</sup> May Last Survey 30<sup>th</sup> Nov 1897

Reg. Book. 11 on the S. K. "Rothesay Bay" (Number of Visits 22) Tons { Gross 101.14 Net 16.4

Master J. Bett Built at Arbuthnot By whom built W. Jarvis When built 1897

Engines made at Leith By whom made John Bean & Co when made 1897

Boilers made at do By whom made do when made 1897

Registered Horse Power 38 Owners Bay Steam Fishing Co (Limited) Port belonging to Kirkcaldy

Nom. Horse Power as per Section 28 38

ENGINES, &c.— Description of Engines Compound No. of Cylinders 2

Diameter of Cylinders 14" & 29" Length of Stroke 20" Revolutions per minute 120 Diameter of Screw shaft as per rule 5.59" as fitted 5.58"

Diameter of Tunnel shaft as per rule 5.31" as fitted 5.2" Diameter of Crank shaft journals 5.58" Diameter of Crank pin 5.58" Size of Crank webs 12" x 4 3/16"

Diameter of screw 7' 6" Pitch of screw 9' 0" No. of blades 4 State whether moveable no Total surface 15 f

No. of Feed pumps 1 Diameter of ditto 2 1/4" Stroke 10" Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2 1/4" Stroke 10" Can one be overhauled while the other is at work ✓

No. of Donkey Engines 1 Sizes of Pumps 6 x 3 x 8" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room One 2" diat + ejector 1 1/4" dt. In Hold, &c. One 2" dt + ejector 1 1/4" dt.

No. of bilge injections 1 sizes 2 1/2" 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 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 vessels 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 660 f

No. and Description of Boilers One multitubular single ended Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs

Date of test 24.9.97 Can each boiler be worked separately ✓ Area of fire grate in each boiler 30 f No. and Description of safety valves to each boiler Two, spring

Area of each valve 4.9 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 6" Mean diameter of boilers 9' 6 1/2"

Length 9' 0" Material of shell plates Steel Thickness 1 1/16" Description of riveting: circum. seams Lap D. Rivd long. seams 2 B.S. Y Rivd

Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4 1/16" Lap of plates or width of butt straps 10"

Per centages of strength of longitudinal joint rivets 90.5 Working pressure of shell by rules 126 lbs Size of manhole in shell 16 x 12

Size of compensating ring 7 x 1 1/16" No. and Description of Furnaces in each boiler 2 - plain Material Steel Outside diameter 37 3/16"

Length of plain part top 6.4 ft bottom 6.4 ft Thickness of plates crown 1 1/32" bottom 1 1/32" Description of longitudinal joint 2 B.S. B Rivd No. of strengthening rings ✓

Working pressure of furnace by the rules 130 lbs Combustion chamber plates: Material Steel Thickness: Sides 15/32" Back 15/32" Top 9/16" Bottom 15/32"

Pitch of stays to ditto: Sides 7" Back 6 3/4" Top 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 128 lbs

Material of stays Steel Diameter at smallest part .76 Area supported by each stay 49 sq" Working pressure by rules 123 lbs End plates in steam space:

Material Steel Thickness 29/32" Pitch of stays 18" How are stays secured on doubling Working pressure by rules 156 lbs Material of stays Steel

Diameter at smallest part 4.77 Area supported by each stay 324 sq" Working pressure by rules 132 lbs Material of Front plates at bottom Steel

Thickness 5/8" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 11 1/2" Working pressure of plate by rules 155 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 1/16" Material of tube plates Steel Thickness: Front 5/8" Back 1 1/16" Mean pitch of stays 9 1/2"

Pitch across wide water spaces 13 1/2" doubling Working pressures by rules 173 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 5 1/4" x 1" Length as per rule 18" Distance apart 9 1/4" Number and pitch of Stays in each 2 - 7"

Working pressure by rules 123 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 ✓

If 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 ✓



LTH566-0244

**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 Rules*

The foregoing is a correct description,  
*John Grant* 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 under steam & the boiler safety valves have been adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 11, 97.*

It is submitted that  
 this vessel is eligible for  
 THE RECORD.  
 + L.M.C. 11, 97  
 T.S.  
 6/12/97

Certificate (if required) to be sent to \_\_\_\_\_

The amount of Entry Fee... £ 1 : - : - : When applied for, *3<sup>rd</sup> Decr. 1897*

Special ... £ 8 : - : - : When received, *22.12.97*

Donkey Boiler Fee ... £ : : : *21.12.97*

Travelling Expenses (if any) £ : 8/ : : *1897*

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

Committee's Minute **TUES, 7 DEC 1897**

Assigned *+ L.M.C. 11, 97*

The Surveyors are requested not to write on or below the space for Committee's Minute.

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