

# REPORT ON MACHINERY.

Port of Glasgow & Grimsby SAT. 4 NOV 1899  
 No. in Survey held at Glasgow & Grimsby Date, first Survey 27 Decr 1898 Last Survey 28 Sept 1899  
 Reg. Book. "KING CANUTE" (Number of Visits 9)  
 q in Sup. on the S.S. Tons Gross 95 Net 92  
 Master H. Bateman Built at Grimsby By whom built Schofield, Hagerup & Doughty, Ltd. When built 1899  
 Engines made at Glasgow By whom made Muir & Houston Ltd when made 1899  
 Boilers made at Grimsby By whom made Schofield, Hagerup & Doughty, Ltd when made 1899  
 Registered Horse Power 45 Owners Monarch Steam Fishing Co. Ltd. Port belonging to Grimsby  
 Nom. Horse Power as per Section 28 46 Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion screw No. of Cylinders 3 No. of Cranks 3  
 Diameter of Cylinders 11", 17", 28" Length of Stroke 20" Revolutions per minute as per rule 5.68  
 Diameter of Tunnel shaft as per rule Diameter of Crank shaft journals 5 5/8" Diameter of Crank pin 5 7/8" Size of Crank webs 3 5/8" thick  
 Diameter of screw 8" 0" Pitch of screw 9" 0" to 10" 0" No. of blades 4 State whether moveable no Total surface 21 sq. ft.  
 No. of Feed pumps 1 Diameter of ditto 2" 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 One Sizes of Pumps 5 x 2 1/2 x 5" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 2" Sea, Bilge, Botwell In Holds, &c. 2" Fish Hold.

No. of bilge injections one sizes 2 1/2" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size 4 1/2" - 2" (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 no  
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & Cocks  
 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 Fish Hold Suction 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 Nov 1899 Is the screw shaft tunnel watertight no  
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 836 sq. ft. Is forced draft fitted No  
 No. and Description of Boilers One - Cylindrical multitubular Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs  
 Date of test 29/6/99 Can each boiler be worked separately ✓ Area of fire grate in each boiler 28 sq. ft. No. and Description of safety valves to  
 each boiler 2 - Patent Spring Area of each valve 3.14 sq. in. Pressure to which they are adjusted 182 lbs sq. in. Are they fitted  
 with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 7 1/2" Mean diameter of boilers 10' 6"  
 Length 9' 0" Material of shell plates Steel Thickness 3/4" Description of riveting: circum. seams DR - lap Long. seams TR - double straps  
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" - 3 1/2" Lap of plates or width of butt straps 17"  
 Per centages of strength of longitudinal joint 95 Working pressure of shell by rules 193 lbs sq. in. Size of manhole in shell 16" x 12"  
 Size of compensating ring Patent ring No. and Description of Furnaces in each boiler 2 - Plain Material Steel Outside diameter 3' 3"  
 Length of plain part 5' 6" Thickness of plates 3/4" Description of longitudinal joint Weld No. of strengthening rings none  
 Working pressure of furnace by the rules 198 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 7/8"  
 Pitch of stays to ditto: Sides 7 1/4" x 7 1/4" Back 7 1/4" x 7 1/4" Top 7 1/4" x 7 1/4" If stays are fitted with nuts or riveted heads None Working pressure by rules 182 lbs  
 Material of stays Steel Area at smallest part 1.45 sq. in. Area supported by each stay 60.06 sq. in. Working pressure by rules 192 lbs End plates in steam space:  
 Material Steel Thickness 1 1/8" Pitch of stays 15" x 15" How are stays secured Nuts Working pressure by rules 185 lbs Material of stays Steel  
 Area at smallest part 4.37 sq. in. Area supported by each stay 22.5 sq. in. Working pressure by rules 194 lbs Material of Front plates at bottom Steel  
 Thickness 1 1/8" Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 9 1/2" Working pressure of plate by rules 188 lbs  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 1/8" Back 1/8" Mean pitch of stays 9"  
 Pitch across wide water spaces 14" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 2' 7" x 7" Length as per rule 27" Distance apart 7 1/2" Number and pitch of Stays in each 2 - 7 1/2"  
 Working pressure by rules 197 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked  
 separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet  
 holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no  
 If stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no  
 Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no



# **DONKEY BOILER—** Description

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 \_\_\_\_\_

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:— 2 each connecting rod top and bottom end bolts & nuts, 2 main beam bolts & nuts, 1 set of coupling bolts & nuts, 6 piston bolts, 1 set of feed, bilge, air & circulating pump valves, 6 stuffing box studs & nuts, 6 cylinder cover studs, assorted bolts & nuts, iron of various sizes, condenser tubes, ferrules, tube stoppers, &c.

The foregoing is a correct description,  
For **MUIR & HOUSTON, LIMITED,** Manufacturer.

PER PRO. SCHOFIELD, HAGERUP AND DOUGHTY, LTD.

During progress of work in shops— 1898:— Dec. 22  
Dates of Survey while building— 1899:— Jan. 26. June 9. July 5. Aug. 2. 9. 30. Sep. 3. 28.  
Total No. of visits 9

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The workmanship is good.*)

**ENGINES**—Length of stern bush 1" 11" Diameter of crank shaft journals as per rule 5.4" as fitted 5 5/8" Diameter of thrust shaft under collars 5 5/8"

**BOILERS**—Range of tensile strength 28/32 tons Are they welded or flanged ✓ **DONKEY BOILERS**—No. ✓ Range of tensile strength

Is the approved plan of main boiler forwarded herewith ✓ Is the approved plan of donkey boiler forwarded herewith ✓

The Engines of this vessel have been constructed under Special Survey, the material & workmanship are of good quality, & in my opinion are eligible to be classed in the Register Book.

The Boiler has been constructed under Special Survey to the approved plan and the Secretary's letter (E) of 13/5/98. The steel has been tested as required by the Rules. The Engines and Boiler have been satisfactorily fitted on board and tried under steam. They are in good and safe working condition and eligible in my opinion to be classed in the Register Book with record of **L.M.C. 10.99.**

It is submitted that this vessel is eligible for **THE RECORD. + L.M.C. 10.99.**

The amount of Entry Fee, £ 1 : - :  
Special £ 2 : - :  
Donkey Boiler Fee £ 1 : - :  
Travelling Expenses (if any) £ : - :  
*Due to Grimaby*

When applied for, 28/10/99  
When received, 3/11/99  
J. W. Dimmock & B. G. Oxford.  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute  
Assigned + Rmc 10.99  
TUES. 7 NOV 1899  
MACHINERY CERTIFICATE  
WRITTEN.

GMS357/56