

REPORT ON MACHINERY.

FRI. 24 NOV 1899

Port of Glasgow & Grimsby

No. in Survey held at Glasgow & Grimsby Date, first Survey 10th January 1899 Received at London Office 17th November 1899 Last Survey October 1899 Gms
 Reg. Book. S. S. "KING EDGAR" (Number of Visits 6)
 Master H. Harris Built at Grimsby By whom built Schofield, Hagerup & Doughty, Ld. when built 1899
 Engines made at Glasgow By whom made Muir & Houston RNE when made 1899
 Boilers made at Grimsby By whom made Schofield, Hagerup & Doughty, Ld. when made 1899
 Registered Horse Power 45 Owners Monarch Steam Fishing Co. Ld. 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 30 Revolutions per minute 110 Diameter of Screw shaft 5.68
 Diameter of Tunnel shaft as per rule none Diameter of Crank shaft journals 5 5/8 Diameter of Crank pin 5 5/8 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, Forward Bilge, After Bilge, Bottom Holds, &c. 2" - Fish Hold

No. of bilge injections one sizes 2 1/2 Connected to condenser, or to circulating pump circ pump Is a separate donkey suction fitted in Engine room & size Yes - 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 None
 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 How new Is the screw shaft tunnel watertight None
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 836 sq ft Is forced draft fitted No
 No. and Description of Boilers One - Cylindrical Multitubular Working Pressure 180 lb Tested by hydraulic pressure to 360 lb
 Date of test 19/7/99 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 180 lb 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 29/32 Description of riveting: circum. seams DR - Lap long. seams TR - Double Straps
 Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 7 1/2 - 3 3/4 Lap of plates or width of butt straps 17"
 Per centages of strength of longitudinal joint ribs 87, plate 85 Working pressure of shell by rules 183 lb 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 top 5'6", bottom 5'10" Thickness of plates crown 3/4", bottom 3/4" Description of longitudinal joint Weld No. of strengthening rings None
 Working pressure of furnace by the rules 198 lb 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 1/2 x 7 1/2 Back 7 1/2 x 7 1/2 Top 7 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 182 lb
 Material of stays Steel Diameter at smallest part 1 1/4 Area supported by each stay 60.06 sq in Working pressure by rules 192 lb End plates in steam space: Material Steel Thickness 1 1/16 Pitch of stays 15" x 15" How are stays secured Nuts Working pressure by rules 185 lb Material of stays Steel
 Diameter at smallest part 1 1/4 Area supported by each stay 225 sq in Working pressure by rules 194 lb Material of Front plates at bottom Steel
 Thickness 1 1/16 Material of Lower back plate Steel Thickness 5/8 Greatest pitch of stays 9 1/2 Working pressure of plate by rules 188 lb
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 1 1/16 Back 1 1/16 Mean pitch of stays 9"
 Pitch across wide water spaces 14" Working pressures by rules 182 lb Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 2 - 7" x 7 1/2" 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 lb 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

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 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:— 2 each connecting rod top & bottom end bolts & nuts; 2 main bearing bolts and 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.
 PER PRO. SCHOFIELD, HAGERUP AND DOUGHTY, LTD.

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

Dates of Survey while building
 During progress of work in shops— 1899:— May 24, June 9, Aug 30, Sep 8, 28, Oct 6, Jan 10, 21, Feb 2, 10, 15, 22, Mar 13
 During erection on board vessel— 1899:— Mar 20, 28, Apr 6, 13, 27, May 10, 24, June 14, 26, July 10, 19, Oct 12
 Total No. of visits 4 & 6 3 & 23

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 *No* **DONKEY BOILERS**—No. / Range of tensile strength /
 Is the approved plan of main boiler forwarded herewith *No* Is the approved plan of donkey boiler forwarded herewith *Yes*

The Engines of this vessel have been constructed under Special Survey, the material and workmanship are of good quality, and are in my opinion 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 **LMC 11-99**

It is submitted that this vessel is eligible for **THE RECORD. + LMC. 11.99**

J.W. Dimmock
 24/11/99

The amount of Entry Fee... £ 1 : : :
 Special... £ 2 : : :
 Donkey Boiler Fee... £ 6 : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 28/10/99
 When received, 23/11/99
 £30.00 paid 15/11/99

J. W. Dimmock & B. G. Oxford
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned GMS357/63
 MACHINERY CERTIFICATE
 DATED 24.11.99
 + LMC 11.99

Certificate (if required) to be sent to the Surveyors (The Surveyors' Report and the space for Committee's Minute.)

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