

No. 17798
Gms 506

REPORT ON MACHINERY.

Port of Glasgow & Grimsby

Received at London Office

MON. 23 APR 1900

No. in Survey held at Glasgow & Grimsby Date, first Survey 24 May 1899 Last Survey 7 March 1900
 Reg. Book. 10 Jan 1899 (Number of Visits 8)
 18 in Sup. on the S.S. KING WILLIAM. Tons { Gross 162 Net 74
 Master B. J. Margerson Built at Grimsby By whom built Hagerup, Doughty, Schofield When built 1900
 Engines made at Glasgow By whom made Muir & Houston when made 1900
 Boilers made at Grimsby By whom made Schofield, Hagerup & Doughty, Ltd when made 1900
 Registered Horse Power 46 Owners Monarch Steam Fishing Co. Ltd Port belonging to Grimsby
 Nom. Horse Power as per Section 28 46 Is Refrigerating Machinery fitted No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple expansion screw. No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 11" 12" 28" Length of Stroke 20" Revs. per minute 5.4 Dia. of Screw shaft 5.68" Lgth. of stern bush 1' 11"
 Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin 5 5/8" Size of Crank webs 3 5/8" x 1 1/2" Dia. of thrust shaft under
 collars 5 5/8" Dia. 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 - Hotwell In Holds, &c. 2" - Fish Hold

No. of bilge injections one sizes 2 1/2" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size 4" 2" 3" and
 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 Away
 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 one suction (Fish Hold) How are they protected Work 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 now 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 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 1-9-99 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 Direct Spring Loaded Area of each valve 3 1/4 sq. in. Pressure to which they are adjusted 180 lb per sq. in. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7 1/2 in. Mean dia. of boilers 10' 6" Length 9' 0" Material of shell plates Steel
 Thickness 2 1/2" Range of tensile strength 28 to 32 tons Are they welded or flanged No Descrip. of riveting: cir. seams DR lap long. seams TR double straps
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 17"
 Per centages of strength of longitudinal joint 87 1/2% Working pressure of shell by rules 183 lb per 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 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 3/4" 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 Nuts Working pressure by rules 182 lb.
 Material of stays Steel Diameter at smallest part 1 1/4" sq. in. Area supported by each stay 60.06 sq. in. Working pressure by rules 192 lb End plates in steam space:
 Material Steel Thickness 1 1/8" 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 4 3/4" Area supported by each stay 225 sq. in. Working pressure by rules 194 lb Material of Front plates at bottom Steel
 Thickness 5/8" 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 1/4" 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 lb per sq. in. 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 3/4"
 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 14" Length 27" Thickness of shell plates 1/8" Material Steel Description of longitudinal joint Weld Diam. of rivet
 holes 1 1/8" Pitch of rivets 7 1/2" Working pressure of shell by rules 182 lb per sq. in. Diameter of flue 14" Material of flue plates Steel Thickness 1/8"
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear Are they fitted with easing gear

DONKEY BOILER— No. *None* 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 _____ Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of ten. _____
 strength _____ Descrip. of riveting long. seams _____ Dia. 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 of connecting rod top & bottom end bolts & nuts, - 2 main beam bolts & nuts, - 1 set of coupling bolts & nuts, - 6 cylinder cover studs & nuts, - 6 piston bolts, - 6 gland studs & nuts, - 1 set of air, circulating, feed & bilge pump valves, safety valve springs, escape valve spring, condenser tubes & ferrules, - tube stoppers, - bolts, nuts, stud iron. Boiler makers.

The foregoing is a correct description,

PER PRO. SCHOFIELD, HAGERUP AND DOUGHTY, LTD.

For **MUIR & HOUSTON, LIMITED,**

Manufacturer.

James Stewart Scott

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - -
 Total No. of visits *8*

1899: May 28, Oct. 6, Nov. 27, 1900: Feb. 28, Mar. 7, 1901: Mar. 24, April 11, 17.

Is the approved plan of main boiler forwarded herewith *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c. The engines of this vessel have been constructed under Special Survey, the material & workmanship are of good quality & 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 boilers 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 4.00**

It is submitted that this vessel is eligible for THE RECORD. **LMC 4.00**

23.4.00

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The amount of Entry Fee. *£ 3 : 0 : 0*
 Special *£ 6 : 0 : 0*
 Donkey Boiler Fee *£*
 Travelling Expenses (if any) *£*

When applied for, *28/3/99*
 When received, *20/4/00*

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

Committee's Minute

TUES. 24 APR 1900

Assigned

+ Lmb 4.00

GMS357/94