

REPORT ON MACHINERY.

Ports of *Glasgow & Grimby*

Received at London Office **MON. 23 APR 1900**

No. in Survey held at *Glasgow & Grimby* Date, first Survey *24 May 1899* Last Survey *7 March 1900*
 Reg. Book. *10 Jan 1899* (Number of Visits *8*)
 98 in Surf. on the *S.S. KING WILLIAM.* Tons { Gross *162* Net *74*
 Master *B. J. Margerson* Built at *Grimby* By whom built *Hagerup, Doughty, Schofield* When built *1900*
 Engines made at *Glasgow* By whom made *Muir & Houston* when made *1900*
 Boilers made at *Grimby* By whom made *Schofield, Hagerup & Doughty, Ltd* when made *1900*
 Registered Horse Power Owners *Monarch Steam Fishing Co. Ltd* Port belonging to *Grimby*
 Nom. Hors. 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 *5.68* Dia. of Screw shaft *5 3/4"* Lgth. of stern bush *1' 11"*
 Dia. of Tunnel shaft *as per rule none* Dia. of Crank shaft journals *as per rule 5.4* Dia. of Crank pin *5 5/8"* Size of Crank webs *3 5/8" x 11"* 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 moceable *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 *circ. pump* Is a separate donkey suction fitted in Engine room & size *4 1/2" 2" 3" and Steam piston 2 1/2"*
 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 *Awash*
 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 *3.14 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 *29/32"* 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"* Imp. of plates or width of butt straps *17"*
 Per centages of strength of longitudinal joint *rievts 87 1/2 plate 95 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 *top 5' 6" bottom 5' 10"* Thickness of plates *top 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 3/4" x 7 1/4"* Back *7 1/4" x 7 1/4"* Top *7 1/4" x 7 1/2"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *182 lb.*
 Material of stays *Steel* *area* 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*
area Diameter at smallest part *4 3/4" sq. in.* 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 *1/16"* Back *1/16"* 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 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— 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 &c. Boiler makers.

The foregoing is a correct description, *PER PRO. SCHOFFIELD, HAGERUP AND DOUGHTY, LTD.*

For **Muir & Houston, Limited,** Manufacturer. *James Stewart*

Dates of Survey while building

During progress of work in shops - - - - -

During erection on board vessel - - - - -

Total No. of visits *4 to 8. 2 to 20.*

1899: - May 21, 28, Oct. 6, 20, Nov. 27.

1900: - Feb. 28, Mar. 7.

1900: - 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

23.4.00

The fee of 69 condenser inches is £1.75

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

When applied for: *20/4/00* *14/00* *Gen fully paid 15-8-1900*

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 **+ L.M.C. 4.00**

GMS357/94

VESS

These particulars

Signal Letters (if any)

Official Number *113,143*

No., Date, and Port

Whether British or Foreign Built. *British*

Number of Decks

Number of Masts

Rigged ...

Stern ...

Build ...

Galleries

Head ...

Framework and vessel ...

Number of Bull

Number of water and their cap

Total to quarter at side amid

No. of Engines

Suppl. Dis. Iron Pres

One Set

Under To Closed-in Space Poop Forec Round Other

Deduc

No. Nam

Certificate (if required) to be sent to