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Rpt. 4.

ceived from
Surveyor.

REPORT ON MACHINERY.

No. 18595 Gls.
989 Gms

7 - JAN. 1901

Port of Glasgow & Grimsby

WED. FEB 6 1901

No. in Survey held at
Reg. Book.

Glasgow & Grimsby

Date, first Survey 4 June

Received at London Office 4 Feb 1901

Last Survey 29 Nov 1900

(Number of Visits 267 Gms 17

Tons Gross 164

Net 73

When built 1901

in Luff on the

S.S. KING GEORGE.

Master J. Stokes

Built at Grimsby

By whom built J. Schofield, Bagrup & Doughty, L^{ts}

Engines made at Glasgow

By whom made Muir & Houston L^{ts}

when made 1900

Boilers made at Grimsby

By whom made Schofield, Bagrup & Doughty, L^{ts}

when made 1901

Registered Horse Power

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. 17. 28"

Length of Stroke 30"

Revs. per minute

Dia. of Screw shaft as per rule 5.68

Lgth. of stern bush 1. 11"

Dia. of Tunnel shaft as per rule

Dia. of Crank shaft journals as per rule 5.4

Dia. of Crank pin 5.78

Size of Crank webs 3.78

Dia. of thrust shaft under

collars 5.78

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 (2) - Hotwell

In Holds, &c. Fish Hold

No. of bilge injections one sizes 2 1/2"

Connected to condenser, or to circulating pump; Is a separate donkey suction fitted in Engine room & size 1/2" also steam ejector 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 and 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 Aftwash

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 With 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 23/5/01 Can each boiler be worked separately Yes

Area of fire grate in each boiler 28 sq. ft.

No. and Description of safety valves to

each boiler 2 - Direct Spring

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"

Mean dia. of boilers 10' 6"

Length 9' 0"

Material of shell plates Steel

Thickness 29/32"

Range of tensile strength 28/32 Tens

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

rivets 87

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 3/4" x 7 1/2"

Top 7 3/4" 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 at smallest part 1.45 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 15/16"

Pitch of stays 15" x 15"

How are stays secured Nuts

Working pressure by rules 185 lb

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 lb

Material of Front plates at bottom Steel

Thickness 1/16"

Material of Lower back plate Steel

Thickness 7/8"

Greatest pitch of stays 9 1/2"

Working pressure of plate by rules 188 lb

Diameter of tubes 3 3/4"

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 1/4"

Working pressures by rules 182 lb

Girders to Chamber tops: Material Iron

Depth and

thickness of girder at centre 2 - 7 x 7 1/8"

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

How stayed

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

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

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

Working pressure by rules

End plates: Thickness

How stayed

Lloyd's Register
Foundation
W869-0023

DONKEY BOILER— No. 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

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile 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 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 top end, bottom end & main bearing bolts & nuts, 1 set of coupling bolts & nuts, 6 piston bolts, 6 cylinder cover studs & nuts, 6 stuffing box studs & nuts, complete set of pump valves, safety & escape valve springs, assorted bolts & nuts, iron of various sizes, condenser tubes & ferrules, tube stoppers, tools &c.

The foregoing is a correct description,

For **Muir & Houston, Limited,**

Manufacturer.

ER PRO. SCHOFIELD, HAGERUP AND DOUGHTY, LTD.

Secretary.

Dates of Survey while building

During progress of work in shops—

During erection on board vessel—

Total No. of visits

1899:— Nov 21, Dec 4.

1900:— June 4, July 31, Sep 10, Oct 3, 10.

1900:— Feb 27, Mar 9, 26, April 9, 24, May 11, 22, 23, Nov 6.

1901:— Jan 2, 7, 15, 22, 28 Feb 14, approved plan of main boiler forwarded herewith

Emo 17.

donkey

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

These engines have been constructed under Special Survey, the material and workmanship are of good quality. In my opinion are eligible to be classed in the Register Book, when they have been fitted aboard with the boiler, at Grimsby.

This Boiler has been constructed under Special Survey in accordance with the approved plan and the Secretary's letter (E) of 13/5/98. The steel has been tested as required by the Rules. The workmanship is good.

The Engines and Boiler have been satisfactorily fitted on board the vessel and tried under steam. They are eligible, in my opinion, to be classed in the Register Book with record of **LMC 2.01**

It is submitted that this vessel is eligible for THE RECORD **LMC 2.01.**

6.2.01

6.2.01.

The amount of Entry Fee £ 5 : :
Special £ 3 : :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : :

When applied for,

1/1/1901

1/2/1901

When received,

13/5/1901

£s Paid.

£s Paid.

£s Paid.

£s Paid.

Committee's Minute **Glasgow.** 14 JAN. 1901

Assigned

Deferred for completion.

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

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+ LMC 2.01
Lloyd's Register
Foundation