

REPORT ON MACHINERY.

Port of *Glasgow & Grimsby*

THUR. 20 JUL 1899

Received at London Office

To, in Survey held at

Glasgow & Grimsby

Date, first Survey

17th Decr '98

Last Survey

26 Jan'y 1899

Book.

5 on the

*S.S. KING ATHELSTAN.*Master *J. B. Margaron*

Built at

Grimsby

By whom built

Schofield, Hagerup & Doughty, Lim

When built

1899

Machinery made at

Glasgow

By whom made

Muir & Houston, Ltd

when made

1899

Machinery made at

Grimsby

By whom made

Schofield, Hagerup & Doughty, Lim

when made

1899

Registered Horse Power

45

Owners

Monarch Steam Fishing Co. Lim

Port belonging to

Grimsby

Horse Power as per Section 28

46

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

No

MACHINERY, &c.—

Description of Engines

Triple Expansion Screw

No. of Cylinders

3

No. of Cranks

3

No. of Cylinders

11, 14, 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 3/8"

Dia. of thrust shaft under

as fitted

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

Yes

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

Yes

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

Engine Room

Sea - Bilge - Motwell - 2"

In Holdg, &c.

High Hold - 2"

No. of bilge injections

*one*Connected to condenser, or to circulating pump *is a separate donkey suction fitted in Engine room & size 9/4" - 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

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

Are all pipes carried through the bunkers

One Suction - High 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*Were stern tube, propeller, screw shaft, and all connections examined in dry dock *Before launching*

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—

(Letter for record *5*)

Total Heating Surface of Boilers

936 sq. ft.

Is forced draft fitted

No

No. and Description of Boilers

One Single-ended Cylindrical Multitubular

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

27-5-99

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

28 sq. ft.

No. and Description of safety valves to

No. of boiler

Two - Spring loaded

Area of each valve

3 1/4 sq. in.

Pressure to which they are adjusted

183 lb sq. in.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7 1/2 ins

Mean dia. of boilers

10 6/16 ins

Length

9' 0"

Material of shell plates

Steel

Thickness

3/16

Range of tensile strength

25,532 lbs

Are they welded or flanged

neither

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 ins

Lap of plates or width of butt straps

17 ins

Percentages of strength of longitudinal joint

87%

Working pressure of shell by rules

183 lb sq. in.

Size of manhole in shell

16" x 12"

No. of compensating ring

Patent ring

No. and Description of Furnaces in each boiler

Two - Plain

Material

Steel

Outside diameter

3' 3"

Length of plain part

top 5' 6"

Thickness of plates

bottom 5' 10"

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

3/8"

Back

3/8"

Top

3/8"

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 1/8 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

1/16"

Pitch of stays

15" x 15"

How are stays secured

Nuts

Working pressure by rules

185 lb

Material of Front plates at bottom

Steel

Diameter at smallest part

4 7/16 sq. in.

Area supported by each stay

225 sq. in.

Working pressure by rules

194 lb

Material of stays

Steel

Thickness

1/16"

Material of Lower back plate

Steel

Thickness

5/8"

Greatest pitch of stays

9 1/2 ins

Working pressure of plate by rules

189 lb

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2"

Material of tube plates

Steel

Thickness: Front

3/8"

Back

3/8"

Mean pitch of stays

9 ins

Pitch across wide water spaces

14 ins

Working pressures by rules

182 lb

Girders to Chamber tops: Material

Iron

Depth and

2-7 1/2"

Thickness of girder at centre

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

Yes

Material

Steel

Description of longitudinal joint

Weld

Diam. of rivet

1 1/8"

Pitch of rivets

7 1/2 ins

Working pressure of shell by rules

183 lb sq. in.

Material of flue plates

Steel

Thickness

3/8"

Diameter of flue

16"

Material of flue plates

Steel

Thickness

3/8"

Stiffened with rings

Yes

Distance between rings

14 ins

Working pressure by rules

182 lb

End plates: Thickness

1/16"

DONKEY BOILER— No. Description *Kone*

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 casing 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 bearing bolts & nuts, - 1 set of air, circulating feed & pump valves, - 1 escape valve spring, - 12 condenser tubes & ferrules, - tube stoppers, - bolts, nuts, stud iron and of various sizes.

The foregoing is a correct description,

Miner Houston D. H. Engine

Manufacturer.

James Schofield
Managing Director

Dates During progress of work in shops - 11, 21, Feb 2, 10, 15, 22, Mar 3, 13, 20, 28, April 6, 13, 27, May 10, 24, 27.

of Survey while building During erection on board vessel - 1899 June 14, July 7, 14, 15.

Total No. of visits 2 9th 20 9mo.

Is the approved plan of main boiler forwarded herewith ☒

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, 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 to 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 7-99**

It is submitted that this vessel is eligible for THE RECORD.

L. M. C. 7-99

20/7/99

Spindly Office

Certificate (if required) to be sent to the Secretary of the Committee's Minute.

The amount of Entry Fee, £ : : When applied for, £ 3.00 16/8/99

Special £ 4.17 14/7/99 9mo

Boiler Fee £ 3.5 17/7/99 9mo

Travelling Expenses (if any) £ : : 17-6 1899 9mo

Committee's Minute

Assigned

FRI, 21 JUL 1899

+ LMC 7-99

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

GMS 357/23

These p

Signal Lett

Official

1108

No., Date,

Whether Bri

Foreign B

Briti

Number of

Number of

Rigged ...

Stern ...

Build ...

Galleries

Head ...

Framework

vessel ...

Number of

Number of

and their

Total to qua

at side an

No. of

Engines

One

Set.

Num

Iron

Press

Under Tonn

Closed-in spa

Space or s

Poop ...

Forecastle

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Other clos

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Deductions, i

Reg

Name

No. of Owner

Name, Reside

Monarch

Frederick,

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Dated 15

R S & Co - P77

P78

