

## REPORT ON MACHINERY.

No. 46795

Port of Newcastle on Tyne

Received at London Office

JULY 12 1904

No. in Survey held at S. ShieldsDate, first Survey Sep. 22<sup>nd</sup> '03Last Survey March 28 1904

Reg. Book.

on the

S. T. Kingfisher(Number of Visits 148)

Tons

Gross

185.71

Net

6.84

Master

Built at S. Shields

By whom built

J. P. Remondson & SonsWhen built 1904. 3.

Engines made at

S. Shields

By whom made

J. P. Remondson & Sonswhen made 1904. 3.

Boilers made at

S. Shields

By whom made

J. S. Eltringham and Co.when made 1904. 1.

Registered Horse Power

Owners Limpool Steam Tug Co. Ltd.Port belonging to Limpool

Nom. Horse Power as per Section 28

107

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

No

ENGINES, &amp;c.—Description of Engines

Triple Compound

No. of Cylinders

3.

No. of Cranks

3.

Dia. of Cylinders

16" - 26" - 43"

Length of Stroke

27"

Revs. per minute

98.

Dia. of Screw shaft

as per rule 8.47"

Material of

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes

Is the after end of the liner made water tight

in the propeller boss

Yes

If the liner is in more than one length are the joints burned

One length

the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

Yes

If two

liners are fitted, is the shaft lapped or protected between the liners

Yes

Length of stern bush

36"

Dia. of Tunnel shaft

as per rule 7.76"

Dia. of Crank shaft journals

as per rule 8.15"

Dia. of Crank pin

8 3/8"

Size of Crank webs

15 1/2 x 5"

Dia. of thrust shaft under

collars

collars

8 1/2"

Dia. of screw

10" - 0"

Pitch of screw

14" - 0"

No. of blades

4.

State whether moveable

Yes

Total surface

36.8 sq ft

No. of Feed pumps

2.

Diameter of ditto

2 1/2"

Stroke

13 1/2"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2.

Diameter of ditto

2 1/2"

Stroke

13 1/2"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Sizes of Pumps

5 1/2" - 4"

No. and size of Suctions connected to both Bilge and Donkey pumps

Four hold. One 2" Bore

In Engine Room

One 2" Bore

In Holds, &amp;c.

Four hold. One 2" Bore

No. of bilge injections

1. sizes 3"

Connected to condenser, or to circulating pump

C. P.

Is a separate donkey suction fitted in Engine room &amp; size

Yes 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

Yes

Are all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Both

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

None

How are they protected

Yes

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 used

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Dick land

OILERS, &amp;c.—

(Letter for record S.)

Total Heating Surface of Boilers

1695 sq ft

Is forced draft fitted

No.

No. and Description of Boilers

One Cyl. Mult. Single end. Working Pressure 180 lb

Tested by hydraulic pressure to

360 lb

Date of test

19. 1. 04

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

48.7 sq ft

No. and Description of safety valves to

each boiler

2. Spring load.

Area of each valve

5.9 sq in

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boiler uptakes and bunkers or woodwork

9"

Mean dia. of boiler

13' - 4 1/2"

Length

10' - 3"

Material of shell plates

S.

Thickness

1 1/2"

Range of tensile strength

29,327 lb

Are they welded or flanged

Yes

Descrip. of riveting: cir. seams

L. D. R.

long. seams

D. B. T. R.

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

8 1/2" (4 p.p.)

Lap of plates or width of butt straps

21 1/4"

Per centages of strength of longitudinal joint

rivets 87%plate 83%

Working pressure of shell by rules

201 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

7 1/2" x 1 1/2"

No. and Description of Furnaces in each boiler

3. Diagonal

Material

S.

Outside diameter

40 1/2"

Length of plain part

top 1"

Thickness of plates

crown 1 1/2"

Description of longitudinal joint

N.A.

No. of strengthening rings

Yes

Working pressure of furnace by the rules

187 lb

Combustion chamber plates: Material

S.

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Pitch of stays to ditto: Sides

9 1/2" : 9"

Back

9 1/2" : 9"

Top

9 1/2" : 9"

If stays are fitted with nuts or riveted heads

huts

Working pressure by rules

191 lb

Material of stays

S.

Diameter at smallest part

1 1/32"

Area supported by each stay

85.5 sq in

Working pressure by rules

200 lb

End plates in steam space:

Material of stays S

Material

S.

Thickness

3 1/2" + 1 1/2"

Pitch of stays

18 1/2" : 17"

How are stays secured

D. N. W.

Working pressure by rules

284 lb

Diameter at smallest part

8 3/4"

Area supported by each stay

314 sq in

Working pressure by rules

210 lb

Material of Front plates at bottom

S.

Thickness

1"

Material of Lower back plate

S.

Thickness

3 1/2"

Greatest pitch of stays

14 1/2" : 9 1/2"

Working pressure of plate by rules

216 lb

Diameter of tubes

3 1/2" - 4 1/2"

Pitch of tubes

4 1/2" : 4 1/2"

Material of tube plates

S.

Thickness: Front

1"

Back

1 1/16"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

183 lb

Girders to Chamber tops: Material

S.

Depth and

thickness of girder at centre

5 7/8" x 3"

Length as per rule

30"

Working pressure by rules

183 lb

Superheater or Steam chest; how connected to boiler

huts

Can the superheater be shut off and the boiler worked

Yes

separately

Diameter

Yes

Length

Yes

Thickness of shell plates

Yes

Material

Yes

Description of longitudinal joint

Yes

Diam. of rivet

Yes

Pitch of rivets

Yes

Working pressure of shell by rules



## DONKEY BOILER—

No.

Description

*None fitted*

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. Connecting Rod. bottom end bolts, 2. ditto top end.  
 2. Main bearing bolts, 1 set coupling bolts, 1 set feed & bidge valves,  
 Assorted bolts, nuts, and iron, Patent piston springs fitted

The foregoing is a correct description,

J. Penfold &amp; Sons Manufacturers of engines,

Jas. D. Cunningham & Co  
Manufacturers of Boilers.

Dates of Survey while building

During progress of work in shops—  
During erection on board vessel—  
Total No. of

EN 9. 1903. Sep. 22 Oct. 22 Nov. 25 9. 1. 24 27 Dec. 4 9. 11. 15 18. 1904 Jan. 4 11. 16 18 26 28 Feb. 9 12. 16 22 26 29 Mar. 17. 22 25.  
 136. 1903. Sep. 30 Oct. 5 14 20 23 29 Nov. 5 10. 17 23 26 Dec. 4 9. 15 21. 1904 Jan. 6 11. 18 19

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " "

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

The above engines and boiler have been constructed and fitted under special survey, the material used in their construction is good, and workmanship sound. The vessel is eligible, in my opinion, for record. + d.M.C. 3. 04 in Register Book of this Society

It is submitted that  
 this vessel is eligible for  
 THE RECORD F.L.M.C. 3. 04

12. 4. 04  
 12. 4. 04

The amount of Entry Fee..

£ 2

When applied for,

Special

£ 16

11 APR 1904

Donkey Boiler Fee

£

When received,

Travelling Expenses (if any)

£

157. 4. 04

Engineer Surveyor to Lloyd's Register of British &amp; Foreign Shipping.

Committee's Minute

FRI. 15 APR 1904

Assigned

+ L.M.C. 3. 04

MACHINERY CERTIFICATE  
WRITTEN.

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Lloyd's Register  
Foundation

Newcastle-on-Tyne.

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)