

REPORT ON MACHINERY. 27820

No. 27820

(Received in London Office 2/11/81)

No. in Survey held at Reg. Book.

Preston

Date, first Survey

17th February

Last Survey

20th Oct. 1881

on the

Screw Steamer "Jackal"

Tons

78.40
116.29

Master

R. Downer

Built at

Preston

When built

1881.

Engines made at

Preston

By whom made

R. Smith

when made

1881.

Boilers made at

CH Preston

By whom made

C. O'Neil

when made

1881.

Registered Horse Power

30

Owners

James & Hitchens B^{rs}

Port belonging to

Preston

ENGINES, &c.—

Description of Engines

Compound, Inverted, 2 Cylinders.

Diameter of Cylinders

14" x 25"

Length of Stroke

16"

No. of Rev. per minute

120

Point of Cut off, High Pressure

5/8 stroke

Low Pressure 1/2 stroke

Diameter of Screw shaft

4"

Diameter of Tunnel shaft

—

Diameter of Crank shaft journals

4 1/2"

Diameter of Crank pin

4 1/2"

size of Crank webs 5" x 3 1/4"

Diameter of screw

5.9"

Pitch of screw

8.6"

No. of blades

4

state whether moveable

no

total surface

15 sq. ft.

No. of Feed pumps

one

diameter of ditto

3"

Stroke

8"

Can one be overhauled while the other is at work

—

No. of Bilge pumps

one

diameter of ditto

3"

Stroke

6"

Can one be overhauled while the other is at work

—

Where do they pump from

Engine Room.

No. of Donkey Engines

one

Size of Pumps

2" x 4"

Where do they pump from

Engine room bilge,

sea, and ballast tanks.

Are all the bilge suction pipes fitted with roses

yes

Are the roses always accessible

yes

Are the sluices on Engine room bulkheads always accessible

no

No. of bilge injections

one

and sizes

2" dia.

Are they connected to condenser, or to circulating pump

Circulating pump.

How are the pumps worked

By levers from the low pressure piston rod crosshead.

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

What pipes are carried through the bunkers

Suction pipe to forward ballast tank

How are they protected

By ceiling.

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

12th August 1881

Is the screw shaft tunnel watertight

no tunnel

and fitted with a sluice door

worked from

BOILERS, &c.—

Number of Boilers

One

Description

Cylindrical, multitubular, Single ended.

Working Pressure

80 lbs.

Tested by hydraulic pressure to

160 lbs.

Date of test

22nd August 1881.

Description of superheating apparatus or steam chest

None.

Can each boiler be worked separately

—

Can the superheater be shut off and the boiler worked separately

—

No. of square feet of fire grate surface in each boiler

22 sq. ft.

Description of safety valves

Spring

No. to each boiler

2

area of each valve

5.9"

Are they fitted with easing gear

yes

No. of safety valves to superheater

—

area of each valve

—

are they fitted with easing gear

—

Smallest distance between boilers and bunkers or woodwork

4 ins.

Diameter of boilers

9.0

Length of boilers

8.0

description of riveting of shell long. seams

double riv. lap joint circum. seams

double riv. lap joint

Thickness of shell plates

11/16"

diameter of rivet holes

1"

whether punched or drilled

punched

pitch of rivets

4 3/8"

lap of plating

6 1/4"

per centage of strength of longitudinal joint

77

working pressure of shell by rules

80 lbs.

size of manholes in shell

15" x 11"

size of compensating rings

5" x 3 1/4"

No. of Furnaces in each boiler

2

outside diameter

2.8 1/16"

length, top

5.3"

bottom

7.3"

Thickness of plates

11/16"

description of joint

welded

if rings are fitted

no flange

greatest length between

flanges 2.9"

Working pressure of furnace by the rules

106 lbs.

Combustion chamber plating, thickness, sides

7/16"

back

7/16"

top

7/16"

pitch of stays to ditto

sides

8 1/4" x 8 1/4"

back

8 1/4" x 8 1/4"

top

8 1/4" x 8 1/4"

stays are fitted with nuts or riveted heads

nuts

working pressure of plating by rules

99 lbs.

diameter of stays at smallest part

1 3/8"

working pressure of ditto by rules

130 lbs.

and plates in steam space, thickness

11/16"

pitch of stays to ditto

16" x 10"

how stays are secured

Wattle nuts

Working pressure by rules

75 lbs.

Strength

diameter of stays at smallest part

2"

working pressure by rules

117 lbs.

front plates at bottom, thickness

11/16"

Back plates, thickness

11/16"

greatest pitch of stays

13"

working pressure by rules

100 lbs.

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{1}{2}$ " thickness of tube plates, front $3\frac{1}{4}$ " back $3\frac{1}{4}$ "
How stayed Stay tubes pitch of stays $13\frac{1}{2} \times 9$ " width of water spaces $1\frac{1}{4}$ "
Diameter of ~~Superheater~~ Steam chest $2\frac{1}{2}$ " length $2\frac{1}{2}$ "
Thickness of plates $3\frac{1}{8}$ " description of longitudinal joint lap double diameter of rivet holes $1\frac{1}{8}$ " pitch of rivets $2\frac{3}{4}$ "
Working pressure of shell by rules 119 lbs. Diameter of flue thickness of plates
If stiffened with rings distance between rings Working pressure by rules
End plates of superheater, or steam chest; thickness $\frac{1}{2}$ " How stayed 4 Vertical stays $1\frac{1}{2}$ " dia.
~~Superheater~~ or steam chest; how connected to boiler By flange

DONKEY BOILER—

Description

No Donkey Boiler

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

If fitted with easing gear

If steam from main boilers can enter the donkey boiler

Diameter of donkey boiler

length

description of riveting

thickness of shell plates

diameter of rivet holes

whether punched or drilled

pitch of rivets

lap of plating

per centage of strength of joint

thickness of crown plates

stayed by

Diameter of furnace, top

bottom

length of furnace

thickness of 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 plates

thickness of water tubes

The foregoing is a correct description,

Richard Smith

Manufacturer.

General Remarks

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

The machinery and boiler, are of a good quality of workmanship, they have been constructed under Special Survey, tried under steam, and found to work satisfactorily and are now in good order and safe working condition and render this vessel eligible, in my opinion, to have
✠ Lloyd's M. C. 10.81. recorded in the Register of this Society.

The amount of Entry Fee £ 1 : 0 : 0 received by me,

Special

£ 8 : 0 : 0

23/10/81

J. F. L.

Certificate (if required) .. £ : : 18

To be sent as per margin.

(Travelling Expenses, if any, £ 3.16.9)

Committee's Minute

Liverpool Nov 1st 1881.

✠ Lloyd's M. C. 10-81.

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

J. Stoddart



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