

REPORT ON MACHINERY.

No. 5230

No. in Survey held at Reg. Book.

on the

Master

Engines made at

Boilers made at

Registered Horse Power

Owners

(Received at Lloyd's Register 5 JULY 1883)

Date, first Survey

Last Survey

Tons

Built at

When built

By whom made

when made

By whom made

when made

Port belonging to

ENGINES, &c.—

Description of Engines

Diameter of Cylinders

Length of Stroke

No. of Rev. per minute

Point of Cut off, High Pressure

Low Pressure

Diameter of Screw shaft

Diameter of Tunnel shaft

Diameter of Crank shaft journals

Diameter of Crank pin

size of Crank webs

Diameter of screw

Pitch of screw

No. of blades

state whether moveable

total surface

No. of Feed pumps

diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

diameter of ditto

Stroke

Can one be overhauled while the other is at work

Where do they pump from

No. of Donkey Engines

Size of Pumps

Where do they pump from

Are all the bilge suction pipes fitted with roses

Are the roses always accessible

Are the sluices on Engine room bulkheads always accessible

No. of bilge injections

and sizes

Are they connected to condenser, or to circulating pump

How are the pumps worked

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

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

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

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

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

Is the screw shaft tunnel watertight

and fitted with a sluice door

worked from

BOILERS, &c.—

Number of Boilers

Description

Working Pressure

Tested by hydraulic pressure to

Date of test

Description of superheating apparatus or steam chest

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

Description of safety valves

No. to each boiler

area of each valve

Are they fitted with easing gear

No. of safety valves to superheater

area of each valve

are they fitted with easing gear

Smallest distance between boilers and bunkers or woodwork

Diameter of boilers

Length of boilers

description of riveting of shell long. seams

circum. seams

Thickness of shell plates

diameter of rivet holes

whether punched or drilled

pitch of rivets

Lap of plating

per centage of strength of longitudinal joint

working pressure of shell by rules

Size of manholes in shell

size of compensating rings

No. of Furnaces in each boiler

outside diameter

length, top

bottom

Thickness of plates

description of joint

if rings are fitted

greatest length between rings

Working pressure of furnace by the rules

Combustion chamber plating, thickness, sides

back

top

Pitch of stays to ditto

sides

back

top

If stays are fitted with nuts or riveted heads

working pressure of plating by rules

Diameter of stays at smallest part

working pressure of ditto by rules

End plates in steam space, thickness

pitch of stays to ditto

how stays are secured

Working pressure by rules

diameter of stays at smallest part

working pressure by rules

Front plates at bottom, thickness

Back plates, thickness

greatest pitch of stays

working pressure by rules

5230-46-0040

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{1}{2}$ " thickness of tube plates, front $1\frac{1}{16}$ " back $1\frac{1}{16}$ "
How stayed *Stay tubes* pitch of stays $13\frac{1}{2} \times 9$ " width of water spaces $1\frac{1}{4}$ "
Diameter of Superheater or Steam chest $3' 0"$ length $5' 0"$
Thickness of plates $7\frac{1}{16}$ " description of longitudinal joint *lap at rt. end* diameter of rivet holes $1\frac{1}{16}$ " pitch of rivets $2\frac{3}{16}$ "
Working pressure of shell by rules $125\frac{1}{2}$ Diameter of flue \checkmark thickness of plates \checkmark
If stiffened with rings \checkmark distance between rings \checkmark Working pressure by rules \checkmark
End plates of superheater, or steam chest; thickness $\frac{1}{2}$ " How stayed *Conical ended.*
Superheater or steam chest; how connected to boiler *angle iron (4 x 4 x 5/8) angle at rt. end*

DONKEY BOILER—

Description *Artificial steam and water tubes.*
Made at *Guthrie* By whom made *Walter, Glasgow* when made *24-4-83.*
Where fixed *At the mill* working pressure $70\frac{1}{2}$ Tested by hydraulic pressure to $140\frac{1}{2}$ No. of Certificate *1228*
Fire grate area 25.5 sq ft Description of safety valves *Spring* No. of safety valves *Two* area of each 7.07 sq in.
If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
Diameter of donkey boiler $7' 0"$ length $18' 0"$ description of riveting *lap at rt. end*
thickness of shell plates $9\frac{1}{16}$ " diameter of rivet holes $1"$ whether punched or drilled *Punched*
pitch of rivets $3\frac{1}{2}$ " lap of plating $4\frac{7}{8}$ " per centage of strength of joint 71%
thickness of crown plates $5\frac{1}{8}$ " stayed by *diagonal and 7 stays.*
Diameter of furnace, top $5' 8"$ bottom $5' 11\frac{1}{2}"$ length of furnace $5' 6"$
thickness of plates $5\frac{1}{8}$ " description of joint *lap angle at rt. end*
thickness of furnace crown plates $9\frac{1}{16}$ " stayed by *same as shell crown.*
Working pressure of shell by rules $79\frac{1}{2}$ working pressure of furnace by rules $70\frac{1}{2}$
diameter of uptake $18"$ thickness of plates $7\frac{1}{16}$ " thickness of water tubes $3\frac{1}{8}"$

The foregoing is a correct description,

J. Richardson & Sons Manufacturers of Engines & Steam Boilers only
J. Richardson

The above particulars of Donkey Boiler are correct from a report forwarded by the Inspecting Engineer, Glasgow, under whose inspection the Boiler was built, and according to the above.
James Lambie.

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

Material and Workmanship good.
The furnace crown plates, combustion chamber, water tubes, and back tube plate are of the manufacture by J. & W. Gladstone, Glasgow.
The Machinery and other of the above named Firm are in good order and safe working condition, and in my opinion, eligible for the Certificate L.M.C. 6.83. in the Register Book.

It is submitted that this vessel is eligible to be registered & the certificate should be issued Jm 5/7/83

The amount of Entry Fee .. £ 2 : : received by me, *Jm*
Special .. £ 14 : :
Certificate (if required) .. £ : : *3 shillings 18 83*
To be sent as per margin.
(Travelling Expenses, if any, £ 2.5.)

Committee's Minute

FRIDAY 6 JULY 1883

18