

REPORT ON MACHINERY.

530

No. in Survey held at
gg. Book.

Newcastle

Date, first Survey

11th Dec 1880 Last Survey 8th July 1881

on the

Screw Steamer "De Bay".

Tons 1664
1083

aster

W. Baird

Built at

Newcastle

When built

1881

Engines made at

Newcastle

By whom made

Palmer & Co

when made

1881

Boilers made at

Do

By whom made

Do

when made

1881

Registered Horse Power

160

Owners

Capper Alexander & Co.

Port belonging to

Bar diff

GINES, &c.—

Description of Engines

Inverted compound Surface Condensing

Diameter of Cylinders

30" & 55"

Length of Stroke

42"

No. of Rev. per minute

60

Point of Cut off, High Pressure

22"

Low Pressure

18"

Diameter of Screw shaft

10 3/4"

Diameter of Tunnel shaft

10"

Diameter of Crank shaft journals

10 3/4"

Diameter of Crank pin

11"

size of Crank webs 12 1/2" x 7 1/2"

Diameter of screw

15" 0"

Pitch of screw

16" 0"

No. of blades

4

state whether moveable

yes

total surface 58 square ft.

No. of Feed pumps

2

diameter of ditto

4 1/4"

Stroke

18"

Can one be overhauled while the other is at work

yes.

No. of Bilge pumps

2

diameter of ditto

4 1/4"

Stroke

18"

Can one be overhauled while the other is at work

yes.

Where do they pump from

engine space, after hold well, tunnel well and all tanks and sea

No. of Donkey Engines

2

Size of Pumps

4" x 6" & 4" x 12"

Where do they pump from

engine space, after hold

well, tunnel well, ballast tanks and sea

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

yes.

No. of bilge injections

1

and sizes

5"

Are they connected to condenser, or to circulating pump

circulating

How are the pumps worked

lowers over condenser

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.

That pipes are carried through the bunkers

none

How are they protected

—

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

new

Is the screw shaft tunnel watertight

yes.

and fitted with a sluice door

yes.

worked from

engine room platform

OILERS, &c.—

Number of Boilers

2

Description

cylindrical & multitubular

Working Pressure

80 lbs.

Tested by hydraulic pressure to

160 lbs.

Date of test

8.3.81

No. of Certif^c 555.

Description of ~~boilers~~ steam chest

horizontal dome, connected to boiler by copper pipes & stop valves

Can each boiler be worked separately

yes.

Can the superheater be shut off and the boiler worked separately

—

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

43 sq. ft.

Description of safety valves

spring

No. to each boiler

2

area of each valve

12.5 sq. ins.

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

9"

Diameter of boilers

12" 9"

Length of boilers

10" 0"

description of riveting of shell long. seams

lap, triple riv circum. seams

double riv

Thickness of shell plates

7/8"

diameter of rivet holes

1 3/16"

whether punched or drilled

drilled

pitch of rivets

1 1/4"

Lap of plating

9"

per centage of strength of longitudinal joint

74

working pressure of shell by rules

80 lbs.

Size of manholes in shell

12" x 16" through end plate

size of compensating rings

—

No. of Furnaces in each boiler

3

outside diameter

39 ins.

length, top

5" 9"

bottom

8" 10"

Thickness of plates

5/16" top
7/16" bottom

description of joint

lap

if rings are fitted

none

greatest length between rings

—

Working pressure of furnace by the rules

82 lbs.

Combustion chamber plating, thickness, sides

1/2"

back

7/16"

top

7/16"

Pitch of stays to ditto

—

sides

8 3/4" x 8"

back

8 1/2" x 8"

top

23" radius

If stays are fitted with nuts or riveted heads

riveted heads

working pressure of plating by rules

89 lbs.

Diameter of stays at smallest part

1 1/2"

working pressure of ditto by rules

102 lbs.

End plates in steam space, thickness

3/4"

pitch of stays to ditto

15 7/8"

how stays are secured

d. n washers

Working pressure by rules

87 lbs.

diameter of stays at smallest part

2 1/4"

working pressure by rules

86 lbs.

Front plates at bottom, thickness

1 1/16"

Back plates, thickness

1 1/16"

greatest pitch of stays

11"

working pressure by rules

100 lbs.

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WNC 778-0106

Diameter of tubes $3\frac{1}{2}$ " pitch of tubes $4\frac{1}{2}$ " thickness of tube plates, front $\frac{3}{4}$ " back $\frac{1}{6}$ "
How stayed tube stays pitch of stays $13\frac{1}{2}$ " width of water spaces 10"
Diameter of ~~Superheater~~ or Steam chest $4\frac{1}{2}$ " length 6" 0"
Thickness of plates $\frac{1}{2}$ " description of longitudinal joint lap. d. riv diameter of rivet holes $\frac{7}{8}$ " pitch of rivets $2\frac{3}{4}$ "
Working pressure of shell by rules 99 lbs. Diameter of flue — thickness of plates —
If stiffened with rings — distance between rings — Working pressure by rules —
End plates of ~~Superheater~~ steam chest; thickness $\frac{13}{16}$ " How stayed 4, $2\frac{1}{4}$ " diam. stays effective
~~Superheater~~ steam chest; how connected to boiler ~~Steam pipes and stop valves~~

DONKEY BOILER— Description cylindrical and Vertical
Made at ~~Newcastle~~ By whom made ~~Clarke & Symonds~~ when made June 1881
Where fixed ~~Stockholm~~ working pressure 50 lbs. Tested by hydraulic pressure to 100 lbs. No. of Certificate 568
Fire grate area 22 sq. ft. Description of safety valves spring. No. of safety valves 1 area of each 11 sq. in.
If fitted with easing gear ~~yes~~ If steam from main boilers can enter the donkey boiler ~~No~~
Diameter of donkey boiler $6\frac{1}{2}$ " length 13" 3" description of riveting long seams, double rivets
thickness of shell plates $\frac{3}{8}$ " diameter of rivet holes $\frac{3}{4}$ " whether punched or drilled punched.
pitch of rivets 5" lap of plating $4\frac{1}{2}$ " per centage of strength of joint 75
thickness of crown plates $\frac{7}{16}$ " stayed by 6, $1\frac{1}{2}$ " stays
Diameter of furnace, top $4\frac{1}{2}$ " 8" bottom $5\frac{1}{2}$ " 4" length of furnace 6" 9"
thickness of plates $\frac{1}{2}$ " description of joint single riveted.
thickness of furnace crown plates $\frac{1}{2}$ " stayed by 5, $1\frac{1}{2}$ " stays.
Working pressure of shell by rules 60 lbs. working pressure of furnace by rules 60 lbs.
diameter of uptake 15" thickness of plates $\frac{3}{8}$ " thickness of water tubes $\frac{3}{8}$ "

The foregoing is a correct description,

Manufacturer.

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

The machinery of this vessel has been specially surveyed during construction, the materials and workmanship good, and render the vessel eligible in my opinion to have the notification of Lloyd's M.B. recorded in the Society Register Book.

The amount of Entry Fee £ 3 : - : - received by me,

Special £ 24 : - : -

Certificate (if required) gratis — : - : - 6th July 1881

To be sent as per margin.

(Travelling Expenses, if any, £ — : - : -)

Committee's Minute

12/7/81 18

+ Lloyd's

Robert Edmund Taylor & Son Printers, 19, Old Street, Goswell Road, London, E.C.

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