

REPORT ON MACHINERY.

No. 560

No. in Survey held at

Reg. Book.

Sunderland

Date, first Survey 30th March 80 / Last Survey Dec^r 20th 1880

on the

Screw Steamer "Canonbury"

Tons

1676

1080

Master

Knutson

Built at

Sunderland

When built

Dec^r 1880

Engines made at

Sunderland

By whom made

G. Clark

when made

Dec^r 80

Boilers made at

D^r

By whom made

D^r

when made

D^r

Registered Horse Power

150

Owners

Watts Ward & Co

Port belonging to

Sunderland

ENGINES, &c.—

Description of Engines

Inverted Compound Surface Condensing

Diameter of Cylinders

32" x 60"

Length of Stroke

39"

No. of Rev. per minute

60

Point of Cut off, High Pressure 1/2 stroke Low Pressure 2/3 stroke

Diameter of Screw shaft

10 1/2"

Diameter of Tunnel shaft

10"

Diameter of Crank shaft journals

10 1/2"

Diameter of Crank pin

11 1/2"

size of Crank webs 13 1/2 x 6 1/2"

Diameter of screw

14 1/2"

Pitch of screw

16 1/2"

No. of blades

4

state whether moveable yes total surface 50 sq ft

No. of Feed pumps

Two

diameter of ditto

4 1/4"

Stroke

19 1/2"

Can one be overhauled while the other is at work yes

No. of Bilge pumps

Two

diameter of ditto

4 1/4"

Stroke

19 1/2"

Can one be overhauled while the other is at work yes

Where do they pump from

The bilges of the Engine room, aft well, aft hold, & fore well.

No. of Donkey Engines

Two

Size of Pumps

8" dia x 10" stroke

Where do they pump from The large one from Ballast tanks

Bilges of Engine room, aft & fore wells & aft hold, & sea. Small one from same places, & from holdwell by a hose

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

one

and sizes

4" dia

Are they connected to condenser, or to circulating pump to circulating pump

How are the pumps worked by levers attached to the piston rod crosshead of after engine.

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

yes

Are they Valves or Cocks

Valves & 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

That pipes are carried through the bunkers

How

How are they protected

by sand & wood

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

Top E.R. Platform

BOILERS, &c.—

Number of Boilers

Two

Description

Cylindrical & Multitubular

Working Pressure

80 lbs

Tested by hydraulic pressure to

160 lbs

Date of test

10.7.80

Description of superheating apparatus or steam chest

Horizontal dome

Can each boiler be worked separately

yes

Can the superheater be shut off and the boiler worked separately

no superheater

Area of square feet of fire grate surface in each boiler

39

Description of safety valves

Spring valves by Mr G. Clark

Area of each valve

Two

area of each valve

12 1/2"

Are they fitted with easing gear

yes

Area of safety valves to superheater

area of each valve

are they fitted with easing gear

Smallest distance between boilers and bunkers or woodwork

16"

Diameter of boilers

12 1/2"

Length of boilers

10 1/2'

description of riveting of shell long. seams

Double riv'd lap

circum. seams

double riv'd lap

Thickness of shell plates

7/8"

Diameter of rivet holes

1 1/16"

whether punched or drilled

drilled

pitch of rivets

4 1/2"

Percentage of plating

7 3/4%

percentage of strength of longitudinal joint

72.9

working pressure of shell by rules

82 lbs

Size of manholes in shell

16" x 12"

size of compensating rings

7 1/2" x 7 1/2"

Number of Furnaces in each boiler

2

outside diameter

3 1/2'

length, top

1 1/2'

bottom

1 1/2'

Thickness of plates

7/16"

description of joint

double butt & single riv'd

if rings are fitted

none

greatest length between rings

Working pressure of furnace by the rules

88 lbs

Combustion chamber plating, thickness, sides

1/2"

back

1/2"

top

1/2"

Thickness of stays to ditto

sides

9" x 9"

back

9 1/2" x 9"

top

Circular 2 1/2" dia & 15 1/2" pitch

Are stays fitted with nuts or riveted heads

nuts

working pressure of plating by rules

90 lbs

Diameter of stays at smallest part

1 3/8"

working pressure of ditto by rules

108 lbs

Thickness of plates in steam space, thickness

3/4"

pitch of stays to ditto

15 1/2" x 14"

how stays are secured

double nuts

Working pressure by rules

84 lbs

diameter of stays at smallest part

2 1/4"

working pressure by rules

108 lbs

Front plates at bottom, thickness

5/8"

Back plates, thickness

5/8"

greatest pitch of stays

12" x 9 1/2"

working pressure by rules

83 lbs

IRON 497-0295

Diameter of tubes $3\frac{3}{4}$ pitch of tubes 5×5 thickness of tube plates, front $\frac{3}{4}$ back $\frac{7}{8}$
How stayed stay tubes pitch of stays 10×10 width of water spaces $1\frac{1}{4}$ 28727 Jan.
Diameter of Superheater Steam chest $3 \cdot 6$ length $10 \cdot 6$
Thickness of plates $\frac{3}{8}$ description of longitudinal joint double lap diameter of rivet holes $\frac{3}{4}$ pitch of rivets $2\frac{1}{2}$
Working pressure of shell by rules 96 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 $\frac{3}{8}$ How stayed spherical. no stays
Superheater or steam chest; how connected to boiler by an oval neck piece $16 \times 13 \times 3\frac{1}{4}$.

DONKEY BOILER—

Description Vertical Water tubes in furnace
Made at Stockton By whom made Riley Bros., when made 1880. Tested 4-11-80
Where fixed M. Stokhold working pressure Certified 80 lbs Tested by hydraulic pressure to 160 lbs No. of Certificate 438
Fire grate area 21 sq. ft. Description of safety valves Spring Valves No. of safety valves Two area of each 6.2 sq. ins
If fitted with casing gear Yes If steam from main boilers can enter the donkey boiler No
Diameter of donkey boiler $6 \cdot 0$ length $13 \cdot 6$ description of riveting Lap & seams lap double Single
thickness of shell plates $\frac{1}{32}$ diameter of rivet holes $\frac{13}{16}$ whether punched or drilled Punched
pitch of rivets $2\frac{3}{4}$ lap of plating $4\frac{1}{2}$ per centage of strength of joint 70
thickness of crown plates $\frac{1}{32}$ stayed by Six stays $1\frac{1}{2}$ dia
Diameter of furnace, top $4 \cdot 11$ bottom $5 \cdot 5$ length of furnace $5 \cdot 2$
thickness of plates $\frac{5}{8}$ description of joint Lap Single riveted
thickness of furnace crown plates $\frac{7}{32}$ stayed by Six stays $1\frac{1}{2}$ dia
Working pressure of shell by rules 85 lbs working pressure of furnace by rules 80 lbs
diameter of uptake 13 thickness of plates $\frac{1}{16}$ thickness of water tubes $\frac{3}{8}$

The foregoing is a correct description,

~~Wm. Stokhold~~ Manufacturer. Except of the Donkey Boiler.

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

The Engines and Boilers of this vessel have been constructed under special survey. The Material and Workmanship are good and efficient.

The Machinery has been tried under steam and found satisfactory, and in our opinion is in good order and safe working condition, and eligible for the distinguishing mark
* LLOYD'S MC in the Register Book.

It is submitted that this vessel is eligible to have the notification & Lloyd's MC recorded in the Register Book JM 21/12/80

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

Special .. £ 22 : 10 : 0

Certificate (if required) * £ " : " : 15 Dec. 1880.

To be sent as per margin.

(Travelling Expenses, if any, £ —)

Committee's Minute

Tuesday, December, 28th 1880.

William Allison & J. M. Hegor
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.