

REPORT ON MACHINERY.

No. 5196.

No. in Survey held at Reg. Book.

Stockton
S. S. "Cybele"

Date, first Survey 22 Feb 83

(Received at London Office) Rec'd 25 JUNE, 1883

Last Survey 25 May 1883
(14 weeks)

Tons 1287
819

on the

Master

Jucker

Built at

Stockton

When built 1883

Engines made at

Stockton

By whom made

Blair & Co (Lim)

when made

1883

Boilers made at

Do

By whom made

Do

when made

Do

Registered Horse Power

110

Owners

M. Cloake

Port belonging to

London

Enginers Nominal Horse Power 110

ENGINES, &c.—

Description of Engines

Compound Inverted Surface Condensing

Diameter of Cylinders

28 1/2 x 53

Length of Stroke

33

No. of Rev. per min

65

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

Diameter of Screw shaft

10

Diameter of Tunnel shaft

9 3/8

Diameter of Crank shaft journals

9 3/4

Diameter of Crank pin

10 1/4

size of Crank web 13 1/2 x 7

Diameter of screw

13.0

Pitch of screw

16.0

No. of blades

Four

state whether moveable

No

total surface Not ascertained

No. of Feed pumps

Two

diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

Yes

Where do they pump from

from fore hold, engine room, after well & tanks, after pump from after well & engine room

No. of Donkey Engines

Two

Size of Pumps

1/2 x 9 1/2

Where do they pump from Large donkey from fore hold

Engine room, after well & ballast tanks

Small donkey from sea, hotwell, & ballast tank

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

6

Are they connected to condenser, or to circulating pump

Circulating pumps

How are the pumps worked

By levers worked from cross head on low pressure piston rod

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

Yes

Are they Valves or Cocks

Stop 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

Below

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

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

Yes

Is the screw shaft tunnel watertight

Said to be

and fitted with a sluice door

Yes

worked from top platform in engine room

BOILERS, &c.—

Number of Boilers

One

Description

Cylindrical Multitubular

Working Pressure

80

Tested by hydraulic pressure to

160 lbs

Date of test

20.4.83

Certificate No 926

Description of superheating apparatus or steam chest

Vertical Skirt dome contracted at neck

Can each boiler be worked separately

Yes

Can the superheater be shut off and the boiler worked separately

No Superheater

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

61.5

Description of safety valves

Spring Made by Blair & Co. Lim

No. to each boiler

Two

area of each valve

19.6

Are they fitted with easing gear

Yes

No. of safety valves to superheater

Yes

area of each valve

Yes

are they fitted with easing gear

Yes

Smallest distance between boilers and bunkers or woodwork

11 top of dome - deck (iron)

Diameter of boilers

15.6 1/2

Length of boilers

11.10

description of riveting of shell long. seams

all welded except seams from plate in inner casing of shell which are double riveted with double butt straps

Double

Thickness of shell plates

1 1/4

diameter of rivet holes

1 1/4

whether punched or drilled

Drilled

pitch of rivets

4 1/2

Lap of plating

Straps 11 1/4

percentage of strength of longitudinal joint

68.6

working pressure of shell by rules

91.9

Size of manholes in shell

16 x 12

size of compensating rings

Rectangular plate 28 x 24 x 1 1/8

No. of Furnaces in each boiler

Three

outside diameter

4.0

length, top

4.0

bottom

4.0

Thickness of plates

7/16

description of joint

Welded

if rings are fitted

Corrugated

greatest length between rings

Yes

Working pressure of furnace by the rules

104 lbs

Combustion chamber plating, thickness, sides

7/2

back

7/2

top

7/2

Pitch of stays to ditto

Yes

sides

8 x 8

back

8 1/2 x 8

top

Curved top

If stays are fitted with nuts or riveted heads

Part rivets - part rivets

working pressure of plating by rules

88.5

Pitch of stays at smallest part

15/16

working pressure of ditto by rules

119.3 lbs

Pitch of stays in steam space, thickness

7/8

pitch of stays to ditto

16 x 15

how stays are secured

Nuts & washers

Working pressure by rules

104.1

diameter of stays at smallest part

2 1/2

working pressure by rules

122.6

Bottom, thickness

7/8

Back plates, thickness

7/8

greatest pitch of stays

4 1/2 x 8 1/2

working pressure by rules

85.6

Smallest dia of stay

15/16

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Diameter of tubes $3\frac{3}{4}$ pitch of tubes $5 \times 5\frac{1}{8}$ thickness of tube plates, front $\frac{1}{8}$ back $\frac{1}{8}$
 How stayed *Stay tubes* pitch of stays $10\frac{1}{4} \times 10$ width of water spaces $\frac{1}{4}$ between tubes $4\frac{1}{2}$ between furnaces
 Diameter of Superheater or Steam chest $3-4$ length $5-0$
 Thickness of plates $\frac{1}{2}$ description of longitudinal joint *Lap double riveted* Diameter of rivet holes $13/16$ pitch of rivets $3\frac{1}{8}$
 Working pressure of shell by rules 118 lbs 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 $4\frac{1}{2}$ *butt $\frac{1}{16}$* How stayed *Four Stays $2\frac{1}{4}$ dia effective*
 Superheater or steam chest; how connected to boiler *By flanged on the boiler in one pipe 16 dia $\frac{1}{8}$ thick double riveted to dome - shell $\frac{1}{16}$*
DONKEY BOILER - Description *Vertical water tubes in furnace*
 Made at *Stockholm* By whom made *Riley Bros* when made *Oct 24. 2. 83*
 Where fixed *to keel hole* working pressure 60 lbs Tested by hydraulic pressure to 120 lbs No. of Certificate *895*
 Fire grate area $25\frac{1}{4}$ ft Description of safety valves *Spring* No. of safety valves *Two* area of each $1.0\frac{1}{2}$ sq in
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Diameter of donkey boiler $6-6$ length $13-6$ description of riveting *Single seams, lap, double riveted*
 thickness of shell plates $\frac{1}{16}$ diameter of rivet holes $13/16$ whether punched or drilled *Punched*
 pitch of rivets $2\frac{3}{4}$ lap of plating $4\frac{1}{4}$ per centage of strength of joint $40-4$
 thickness of crown plates $\frac{1}{2}$ stayed by *by stays $1\frac{1}{2}$ dia*
 Diameter of furnace, top $5-6$ bottom $5-11$ length of furnace $5-2$
 thickness of plates $\frac{1}{32}$ description of joint *Lap single riveted*
 thickness of furnace crown plates $\frac{1}{2}$ stayed by *by stays $1\frac{1}{2}$ dia*
 Working pressure of shell by rules $61-2$ working pressure of furnace by rules 62 lbs
 diameter of uptake 15 thickness of plates $\frac{1}{16}$ thickness of water tubes $\frac{5}{16}$

The foregoing is a correct description,
Robt Blair & Co Manufacturers of Engines - Main Boilers only.
24 Blair

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

Material - workmanship good
 The furnace crown plates, back tube plates & combustion chamber plating of main boiler are of steel.
 The furnaces are corrugated, made by the Leeds Forge Coy. & the remaining steel plates have been supplied by J. W. Beardmore Glasgow
 The Machinery & Boilers have been constructed under Special Survey & are in good order & safe working condition & in my opinion eligible for the certification
 L. M. C. 5.83 in the Register Book

This is to certify that
 the above is correct & true
 the certificate is correct
 recorded M 4/6/83

The amount of Entry Fee .. £ 2 : : : received by me,
 Special .. £ 16 : 10 :
 Certificate (if required) .. £ : : : 30-5-1883
 To be sent as per margin.
 (Travelling Expenses, if any, £)

Committee's Minute

TUESDAY 5 JUNE 1883 18

+ D. M. S.

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

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



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