

REPORT ON MACHINERY.

16936

No. in Survey held at

Newcastle

Date, first Survey

Dec 23/83

Last Survey

July 17/83

g. Book.

on the

Screw steamer "Cardigan"shire

(Number of Visits

23

Tons 2485.81

ster

Courtney

Built at

Newcastle

When built

1883

gines made at

Newcastle

By whom made

R. W. Hawthorn

when made

1883

ilers made at

do

By whom made

do

when made

1883

Registered Horse Power

275

Owners

D. J. Jenkins & Co

Port belonging to

London

GINES, &c.—

Description of Engines

Compound inverted screw

Diameter of Cylinders

38 + 70

Length of Stroke

45

No. of Rev. per minute

60

Point of Cut off, High Pressure

6

Low Pressure

7

Diameter of Screw shaft

12 1/2

Diameter of Tunnel shaft

12

Diameter of Crank shaft journals

12 1/2

Diameter of Crank pin

12 1/2

size of Crank webs

15 x 8

Diameter of screw

16 ft

Pitch of screw

14' 6" 20'

No. of blades

4

state whether moveable

yes

total surface

70 sq

No. of Feed pumps

two

diameter of ditto

3 3/4

Stroke

22 1/2

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

two

diameter of ditto

3 3/4

Stroke

22 1/2

Can one be overhauled while the other is at work

yes

Where do they pump from

Star pump from bilges (3) + sea: port pumps from bilges, tunnel, hold

No. of Donkey Engines

two

Size of Pumps

8 x 14 + 3 1/2 x 8

Where do they pump from

bulb from all tanks

olds bilge tunnel & thro condenser: feed from sea shotwell.

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

Are they connected to condenser, or to circulating pump

circ pump

How are the pumps worked by cover over condenser from after engine

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

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

was overhauled

Is the screw shaft tunnel watertight

yes

and fitted with a sluice door

yes

worked from

deck

OILERS, &c.—

Number of Boilers

two

Description

Cylindrical single-ended steel

Working Pressure

90 lbs

Tested by hydraulic pressure to

180 lbs

Date of test

April 12/83 No 1215

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

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

75 sq

Description of safety valves

spring

No. to each boiler

two

area of each valve

14.190"

Are they fitted with easing gear

yes

No. of safety valves to superheater

none

area of each valve

yes

are they fitted with easing gear

yes

Smallest distance between boilers and bunkers or woodwork

18"

Diameter of boilers

15.3

Length of boilers

10.6

description of riveting of shell long. seams

Cap triple row 5 circum. seams

Cap double row

Thickness of shell plates

29/32

diameter of rivet holes

1 3/8

whether punched or drilled

drilled

pitch of rivets

5 1/2

Lap of plating

1 1/2

per centage of strength of longitudinal joint

75

working pressure of shell by rules

90

Size of manholes in shell

12 x 16"

size of compensating rings

24 x 28 x 3/4

No. of Furnaces in each boiler

three

outside diameter

45

length, top

7.6

bottom

9.6

Thickness of plates

1 1/2

description of joint

welded

if rings are fitted

no

greatest length between rings

9.6

Working pressure of furnace by the rules

90

Combustion chamber plating, thickness, sides

15/32

back

1/2

top

1/2

Pitch of stays to ditto, sides

8 3/4

back

9 3/16

top

radial

If stays are fitted with nuts or riveted heads

nuts

working pressure of plating by rules

90

Diameter of stays at smallest part

1 1/8

working pressure of ditto by rules

92

End plates in steam space, thickness

29/32

pitch of stays to ditto

16 3/8

how stays are secured

double nuts & washers

Working pressure by rules

92

diameter of stays at smallest part

2

working pressure by rules

90

Front plates at bottom, thickness

9/16

Back plates, thickness

5/8

greatest pitch of stays

13

working pressure by rules

90

Diameter of tubes $3\frac{1}{2}$ pitch of tubes $4\frac{3}{4}$ thickness of tube plates, front $\frac{25}{32}$ back $\frac{25}{32}$
How stayed Tube pitch of stays $14\frac{1}{2}$ width of water spaces 6
Diameter of Superheater or Steam chest 8.6 length 5.8
Thickness of plates $\frac{3}{8}$ description of longitudinal joint lap double diameter of rivet holes $\frac{3}{4}$ pitch of rivets $2\frac{1}{2}$
Working pressure of shell by rules 116 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 $\frac{9}{16}$ How stayed 4. 0 2 radius
Superheater or steam chest; how connected to boiler contracted neck

DONKEY BOILER— Description vertical with four cross tubes
Made at Gateshead By whom made Clark Chapman when made 1883
Where fixed stockhold working pressure 80 lbs Tested by hydraulic pressure to 160 No. of Certificate 48712
Fire grate area 23.7 sq Description of safety valves spring No. of safety valves two area of each 7.074
If fitted with casing 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 lap double wd
thickness of shell plates $\frac{9}{16}$ diameter of rivet holes $\frac{15}{16}$ whether punched or drilled punched
pitch of rivets $3\frac{3}{8}$ lap of plating $4\frac{1}{2}$ per centage of strength of joint 72
thickness of crown plates $\frac{5}{8}$ stayed by screw stays $1\frac{3}{4}$ dia
Diameter of furnace, top 5.2 bottom 5.6 length of furnace 5.6
thickness of plates $\frac{9}{16}$ description of joint lap single riveted
thickness of furnace crown plates $\frac{9}{16}$ stayed by as above
Working pressure of shell by rules 85 working pressure of furnace by rules 68 + 20 lbs
diameter of uptake 15 thickness of plates $\frac{3}{8}$ thickness of water tubes $\frac{3}{8}$

The foregoing is a correct description,

W. H. Chapman Manufacturers of Marine Engines & Boilers.

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

The machinery of this vessel has been constructed under special survey - the materials & workmanship are sound & proper & are fitted in accordance with the rules & chapter in my opinion to be classed L. M. C. 7. 83 in the Society's Register Book.

It is submitted that this vessel is eligible to have the notation L. M. C. 7. 83 recorded.

24/7/83

The amount of Entry Fee £ 2 : - : - received by me,

Special £ 33 : 15 : -

Certificate (if required) £ 4 : - : - 23rd July 1883

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

Committee's Minute

FRIDAY 27 JULY 1883

18

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

Lloyd's Register Foundation