

Rpt. 4.

REPORT ON MACHINERY.

No. 67406.

Port of

London.

MON. 5 JUN 1905

Received at London Office 19

No. in Survey held at

London.

Date, first Survey

Dec 13 / 1905

Last Survey

May 31

1905

Reg. Book.

(Number of Visits)

38

up 50 on the

Engines No. 779 for the S.S. "King Alfred"

Boiler No. 779

Tons

Gross 125.23

Net 122.23

56.89

Master

Built at

London

By whom built

James Iron Works Ltd.

When built

Engines made at

London

By whom made

The James Iron Works Ltd. C.L.

when made

1905

Boilers made at

London

By whom made

do:

when made

1905

Registered Horse Power

Owners

London County Council

Port belonging to

London

Nom. Horse Power as per Section 28

53

Is Refrigerating Machinery fitted

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Diagonal compound.

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

16 x 31

Length of Stroke

36

Revs. per minute

Dia. of screw shaft

as per rule

as fitted

Material of

S

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in the propeller boss If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars

Dia. of screw

Pitch of screw

No. of blades

State whether moveable

Total surface

No. of Feed pumps

one

Diameter of ditto

3 1/2

Stroke

10

Can one be overhauled while the other is at work

No. of Bilge pumps

one

Diameter of ditto

3 1/2

Stroke

10

Can one be overhauled while the other is at work

No. of Donkey Engines

one

Sizes of Pumps

4 1/4 x 3 1/4 x 8" stroke

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

one 2" engine & 2" donkey

In Holds, &c.

2" forward & 2" aft.

No. of bilge injections

one

sizes

3"

Connected to

or to circulating pump

Is a separate donkey suction fitted in Engine room & size

yes-2"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

—

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 and all boiler mountings accessible at all times

yes

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

yes.

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

Is the screw shaft tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—

(Letter for record

S)

Total Heating Surface of Boilers

7000

Is forced draft fitted

yes

No. and Description of Boilers

one S.E. return tube

Working Pressure

115

Tested by hydraulic pressure to

230

Date of test

28.3.05

Can each boiler be worked separately

Area of fire grate in each boiler

250

No. and Description of safety valves to

each boiler

2-direct spring

Area of each valve

7.070

Pressure to which they are adjusted

115

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12

Mean dia. of boilers

9-0

Length

8-9

Material of shell plates

S

Thickness

9/16

Range of tensile strength

29-32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

single

long. seams

treble butt

Diameter of rivet holes in long. seams

3/4

Pitch of rivets

4 3/32

Length of plates or

width of butt straps

12

Per centages of strength of longitudinal joint

rivets

83.7

Working pressure of shell by rules

119

Size of manhole in shell

16 x 12

Size of compensating ring

McNails ring

No. and Description of Furnaces in each boiler

2 plain

Material

S

Outside diameter

34 7/8

Length of plain part

top

70

Thickness of plates

crown

9/16

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

142

Combustion chamber plates: Material

S

Thickness: Sides

1/2

Back

1/2

Top

9/16

Bottom

1/2

Pitch of stays to ditto: Sides

8 1/4 x 7 3/4

Back

8 1/2 x 7 1/2

Top

9 1/4 x 8 1/4

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

120

Material of stays

S

Diameter at smallest part

.93

Area supported by each stay

6 1/4"

Working pressure by rules

116

End plates in steam space:

Material

S

Thickness

1/16

Pitch of stays

17 1/2 x 12 1/2

How are stays secured

d. nuts

Working pressure by rules

115

Material of stays

S

Diameter at smallest part

2.87

Area supported by each stay

2180

Working pressure by rules

133

Material of Front plates at bottom

S

Thickness

1/16

Material of Lower back plate

S

Thickness

1/16

Greatest pitch of stays

11 3/4

Working pressure of plate by rules

115

Diameter of tubes

2 1/2

Pitch of tubes

3 1/2

Material of tube plates

S

Thickness: Front

1/16

Back

1/16

Mean pitch of stays

11.4

Pitch across wide water spaces

12 1/2

Working pressures by rules

116

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

6 1/2 x 7 1/2 - 2

Length as per rule

25

Distance apart

9 1/4

Number and pitch of Stays in each

2-8 1/4

Working pressure by rules

135

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

W1531-0159

DONKEY BOILER—

No.

Description

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

Fire grate area

Description of safety valves

No. of safety valves

Area of each

Pressure to which they are adjusted

If fitted with easing gear

If steam from main boiler

enter the donkey boiler

Dia. of donkey boiler

Length

Material of shell plates

Thickness

Range of

strength

Descrip. of riveting long seams

Dia. of rivet holes

Whether punched or drilled

Pitch of rivets

Lap of plating

Per centage of strength of joint

Rivets

Thickness of shell crown plates

Radius of do.

No. of Stays to do.

Dia. of stays

Diameter of furnace Top

Bottom

Length of furnace

Thickness of furnace plates

Descrip.

joint

Thickness of furnace crown plates

Stayed by

Working pressure of shell by rules

Working pressure of furnace by rules

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Alvarado

1905
 Dates of Survey while building
 During progress of work in shops—
 During erection on board vessel—
 Total No. of s

Dec 16. 30 1905 Jan 10. 18. 25 26 31 Feb 6. 8. 9 13. 14. 17 18. 20. 31
 Mar 8. 15. 21. 23 28 Apr 1. 7. 9. 11. 20. 29 May 3. 4. 6. 9. 17. 24. 31

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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

The engines and boiler have been built under special survey. The material has been tested in accordance with the rule requirements. The main steam pipes have been tested by water to 220 lbs, & the boiler to 230 lbs, and the were found tight & sound at these pressures respectively.

The safety valves have been adjusted under steam, and the engines seen working.

The workmanship is good.

This vessel's machinery is eligible in my opinion for record of + LMC 5.05

Boiler stamped:—

N^o 779
 615
 LLOYD'S TEST
 230 LBS
 28.3.05
 F.L.S

It is submitted that
 this vessel is eligible for
 THE RECORD

LMC 5.05 ED. ELEC. L

LMC
 5.6.05

The amount of Entry Fee.. £ 1 : 0 : 0

When applied for,

Special

£ 8 : 0 : 0

31/5/05

Donkey Boiler Fee

£ :

When received,

Travelling Expenses (if any) £ :

£ :

5.6.1905

C. M. A. R. E. B.

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

Committee's Minute

TUES. 6 JUN 1905

Assigned

+ LMC 5.05

MACHINERY CERTIFICATE
 WRITTEN.



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Lloyd's Register
 Foundation

These p

Signal Let

Official

120, 54

No., Date, an

Whether Bri
Foreign B

British

Number of

Number of

Rigged

Stern

Build

Galleries

Head

Framework

vessel

Number of

Number of

and their

Tot l to qua
at side anNo. of
Engines.

One
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 Direc
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Under Tonn
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Spaces for
 Section 7
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No. of Ow
 Name, Res

Head Office:—S

He

Dated

WB & L