

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 Thames 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 ylo

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 paddle as per rule Material of shaft 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 6 3/4 Dia. of Crank pin 6 3/4 Size of Crank webs 4 1/2 x 7 1/4 Dia. of thrust shaft under

collars wheel 8-9 app. Pitch of screw No. of blades 8 State whether moveable feathering 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 1/2 or 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 circulating pump Is a separate donkey suction fitted in Engine room & size ylo-2

Are all the bilge suction pipes fitted with roses ylo Are the roses in Engine room always accessible ylo Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship ylo Are they Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ylo 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 ylo Are the blow off cocks fitted with a spigot and brass covering plate ylo

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 ylo

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

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 ylo

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 ylo

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 5/32 Top 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 McNeil's ring No. and Description of Furnaces in each boiler 2 plain Material S Outside diameter 34 5/8

Length of plain part top 70 bottom 62 1/2 Thickness of plates crown 9/16 Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 114 2 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 3/8 x 7 1/8 Top 9 1/4 x 8 1/4 If stays are fitted with nuts or riveted heads rub 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 1/8 - 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

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.

THE THAMES IRONWORKS, SHIP-BUILDING
 AND ENGINEERING COMPANY, LIMITED.

Alvarnue

Dates of Survey while building
 During progress of work in shops—
 During erection on board vessel—
 Total No. of _____ s _____
 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 290 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

It is submitted that this vessel is eligible for THE RECORD L.M.C. 5.05 F.D. ELEC. L.L.

Boiler stamped:—

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

J.M.
Smb.
 5.6.05

The amount of Entry Fee.. £ 1 : 0 : 0
 Special £ 8 : 0 : 0
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 31/5/05
 When received, 3.6.1905

C. M. Arden
 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
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Certificate (if required) to be sent to
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