

REPORT ON MACHINERY.

No. 67.405

Port of London.

Received at London Office MON. 5 JUN 1905

No. in Survey held at London Date, first Survey Dec 13 Last Survey May 25 1905
 Reg. Book. 66 on the Eugenie No. 776 - for the P.S. "Brunel" (Number of Visits 33)
 Master Baker Built at London By whom built Thames Iron Works S. & C. Tons { Gross 125.7 Net 122.7 57.51
 Engines made at London By whom made The Thames Iron Works S. & C. When made 1905
 Boilers made at London By whom made do. when made 1905
 Registered Horse Power 53 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 app. 63/4 as per rule app. 63/4 as fitted 63/4 Material of shaft 5
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight
 in the propeller boss yes If the liner is in more than one length are the joints burned yes 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 yes If two
 liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush app. 63/4
 Dia. of Tunnel shaft as per rule 63/4 Dia. of Crank shaft journals as per rule 63/4 Dia. of Crank pin 63/4 Size of Crank webs 4 1/2 x 7 1/4 Dia. of thrust shaft under
 collars as fitted 8-9 Pitch of screw 8-9 No. of blades 8 State whether moveable feathering Total surface app. 63/4
 No. of Feed pumps one Diameter of ditto 3 1/2 Stroke 10 Can one be overhauled while the other is at work yes
 No. of Bilge pumps one Diameter of ditto 3 1/2 Stroke 10 Can one be overhauled while the other is at work yes
 No. of Donkey Engines one Sizes of Pumps 4 1/4 x 3 1/4 x 8 Stroke 10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room one 2" engine & one 2" donkey. In Holds, &c. one 2" forward & 2" aft.
 No. of bilge injections one sizes 3" Connected yes to circulating pump yes 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 yes
 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 yes
 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 yes Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record yes) Total Heating Surface of Boilers 700 sq. ft. 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 yes Area of fire grate in each boiler 25 sq. ft. No. and Description of safety valves to
 each boiler 2 - direct spring Area of each valve 7.07 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 5
 Thickness 9/16 Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams single long. seams double butt.
 Diameter of rivet holes in long. seams 3/4 Pitch of rivets 4 1/2 x 32 Lap of plates or width of butt straps 12"
 Per centages of strength of longitudinal joint 83.7 Working pressure of shell by rules 119 Size of manhole in shell 16 x 12
 Size of compensating ring 5 1/2 x 7 1/8 No. and Description of Furnaces in each boiler 2 plain Material 5 Outside diameter 34 1/8
 Length of plain part top 70 bottom 62 1/2 Thickness of plates top 9/16 bottom 9/16 Description of longitudinal joint welded No. of strengthening rings none
 Working pressure of furnace by the rules 142 Combustion chamber plates: Material 5 Thickness: Sides 1/2 Back 1/2 Top 9/16 Bottom 1/2
 Pitch of stays to ditto: Sides 8 1/4 x 7 1/4 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 5 area at smallest part .93 Area supported by each stay 64 sq. in. Working pressure by rules 116 End plates in steam space:
 Material 5 Thickness 1/16 Pitch of stays 17 1/2 x 12 1/2 How are stays secured nut washers Working pressure by rules 115 Material of stays 5
area at smallest part 2.87 Area supported by each stay 218 sq. in. Working pressure by rules 133 Material of Front plates at bottom 5
 Thickness 1/16 Material of Lower back plate 5 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 5 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 5 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 yes Diameter 12 1/2 Length 12 1/2 Thickness of shell plates 1/16 Material 5 Description of longitudinal joint 5 Diam. of rivet
 holes 1/16 Pitch of rivets 12 1/2 Working pressure of shell by rules 116 Diameter of flue 12 1/2 Material of flue plates 5 Thickness 1/16
 If stiffened with rings yes Distance between rings 12 1/2 Working pressure by rules 116 End plates: Thickness 1/16 How stayed yes
 Working pressure of end plates 115 Area of safety valves to superheater yes Are they fitted with easing gear yes

W1397-0057

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 boilers can enter the donkey boiler
Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile 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.
Plates
Dia. of stays. Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of 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.

For

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

Alvarado

Manager.

Dates of Survey while building
During progress of work in shops— 1904 Dec 12 to 30 1905 Jan 10 11 18 25 26 31 Feb 6 8 13 14 17 18 22 23 Mar 2 7 8 13 15 16 17 19 27 May 3 4 6 9 17 24 25
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 engine 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, and the boiler to 230 lbs, and they were found tight and sound at these pressures respectively.
The safety valves have been adjusted under steam and the engine seen working.
The workmanship throughout is good.

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

Boiler stamped:—

N^o 778
614
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 F.D. ELEC. LIGHT

LM

Imb
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, 3/5/05
When received, 3.6.05

Charles & F.L.S.

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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Foundation