

REPORT ON MACHINERY.

Port of London

MON. JAN. 27 1902

No. in Survey held at London Date, first Survey 25th Oct 1901 Last Survey 23rd Jan 1902
 Reg. Book. 239 on the New Donkey Boilers for S.S. 'Electra'
 Master A. Grey Built at Glasgow. By whom built A. Napier & Sons
 Engines made at Glasgow. By whom made A. Napier & Sons
 Boilers made at do By whom made do
 Registered Horse Power 220 Owners Eastern Telegraph Co. Ltd Port belonging to London
 Is Refrigerating Machinery fitted No Is Electric Light fitted Yes

Received at London Office
 Tons { Gross 1219
 Net 656
 When built 1885-1

ENGINES, &c.—Description of Engines

No. of Cylinders	No. of Cranks
Length of Stroke	Revs. per minute
Dia. of Tunnel shaft	Dia. of Screw shaft
Dia. of Crank shaft journals	Dia. of Crank pin
Dia. of screw	Pitch of screw
No. of blades	State whether moveable
Diameter of ditto	Stroke
Diameter of ditto	Stroke
Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps

Is a separate donkey suction fitted in Engine room & size
 Are the roses in Engine room always accessible
 Are the sluices on Engine room bulkheads always accessible
 Are they Valves or Cocks
 Are the discharge pipes above or below the deep water line
 Are the blow off cocks fitted with a spigot and brass covering plate
 How are they protected
 Is the screw shaft tunnel watertight

BOILERS, &c.— (Letter for record) Total Heating Surface of Boilers 2967 Is forced draft fitted No.

No. and Description of Boilers One Tubular Donkey Boiler Working Pressure 85 lb Tested by hydraulic pressure to 170 lb

Area of fire grate in each boiler 160 No. and Description of safety valves to each boiler One Spring Area of valve 9.620 Pressure to which they are adjusted 85 lb Are they fitted with easing gear Yes

Mean dia. of boilers 8.0 Length 7.5 Material of shell plates Steel
 Thickness 1/2 Range of tensile strength 29.32 Are they welded or flanged No Descrip. of riveting: cir. seams Exp. DR² long. seams Exp. Exp. DR²

Working pressure of shell by rules 85 lb Size of manhole in shell 16 x 12

FURNACES No. and Description of Furnaces in each boiler One Plain Material S Outside diameter 3-9

Working pressure of furnace by the rules 106 lb Combustion chamber plates: Material S. Thickness: Sides 1/2 Back 9/16 Top 1/2 Bottom 1/2

Working pressure by rules 100 lb

Material of stays Steel Diameter at smallest part 1 1/8 Area supported by each stay 100 Working pressure by rules 98.76 End plates in steam space: Material S Thickness 3/4 Pitch of stays 17 1/2 How are stays secured By nuts Working pressure by rules 90 lb Material of stays S

Working pressure of plate by rules 100 lb

Material of tube plates S Thickness: Front 3/4 Back 1/16 Mean pitch of stays 5-5/8

Working pressures by rules 110 lb Girders to Chamber tops: Material S. Depth and thickness of girder at centre 4 1/2 x 1 3/4 Length as per rule 1-9 Distance apart 10 Number and pitch of Stays in each 1 x 10

Working pressure by rules 92 lb Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes

Material of flue plates S Thickness 3/4

Working pressure of end plates 92 lb Area of safety valves to superheater None Are they fitted with easing gear Yes

LON 735A-0250

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 Plates 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 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.

Dates of Survey while building

During progress of work in shops - -
During erection on board vessel - -
Total No. of visits

From 31st October 1901 until 2nd December 1901.
From 1st to 23rd January 1902.

Is the approved plan of main boiler forwarded herewith

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

Special Survey. The Material and Workmanship are good and Satisfactory. This Boiler has been built under "donkey" "yes."

Material of screw shaft 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

This Boiler has been tested by Water Pressure to 170 lb per sq. inch and found good. The following mark was stamped on Boiler: No 475. Lloyd's Test 170 lb. D.P. 24-12-'01. A further Report will be sent in this case when the Special Survey on Machinery is completed.

S.S. No 1 due 12.00
RS due 1.01

Submitted action in this case be deferred awaiting the report on the completion of the shell.

CM
28.1.02

29.1.02

The amount of Entry Fee. . . £ : : When applied for, 27/1 1902
Special £ : :
Donkey Boiler Fee £ 2 : 2 : When received,
Travelling Expenses (if any) £ : : 28/1 1902

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

Committee's Minute FRI. FEB 7 1902

Assigned



Lloyd's Register Foundation

Certificate (if required) to be sent to
(Like Surveyors are requested not to write on or below the space for Committee's Minute.)