

# REPORT ON MACHINERY.

No.

No. in Survey held at London  
Reg. Book.

Date, first Survey 15 June 84 Last Survey 20 Jan 1885  
(Number of Visits)

93 on the S.S. "Warwick Castle" Tons 1892

Master Robinson Built at Glasgow When built 1877

Engines made at Glasgow By whom made R Napier & Sons when made 1877

Boilers made at Glasgow By whom made R Napier & Sons when made 1877

Registered Horse Power 370 Owners D Currie & Co Port belonging to London

## ENGINES, &c.—

Description of Engines

Diameter of Cylinders Length of Stroke No. of Rev. per minute Point of Cut off, High Pressure Low Pressure

Diameter of Screw shaft Diameter of Tunnel shaft Diameter of Crank shaft journals Diameter of Crank pin size of Crank webs

Diameter of screw Pitch of screw No. of blades state whether moveable total surface

No. of Feed pumps diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps diameter of ditto Stroke Can one be overhauled while the other is at work

Where do they pump from

No. of Donkey Engines Size of Pumps Where do they pump from

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

No. of bilge injections and sizes Are they connected to condenser, or to circulating pump

How are the pumps worked

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

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

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

Is the screw shaft tunnel watertight and fitted with a sluice door worked from

## BOILERS, &c.— Donkey Boiler

Number of Boilers one Description Return Multitubular

Working Pressure 60 lbs Tested by hydraulic pressure to 120 lbs Date of test 21 Aug 1884

Description of superheating apparatus or steam chest none

Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately

No. of square feet of fire grate surface in each boiler 25 Description of safety valves Spring

No. to each boiler two area of each valve 7.07 Are they fitted with easing gear yes

No. of safety valves to superheater 2 area of each valve — are they fitted with easing gear —

Smallest distance between boilers and bunkers or woodwork about 9" to iron casing

Diameter of boiler 7' 0" Length of boilers 7' 9" description of riveting of shell long. seams double R. Lap circum. seams Double R. Lap

Thickness of shell plates 7/16 diameter of rivet holes 3/4 whether punched or drilled drilled pitch of rivets 3 1/4

Lap of plating 5 5/8 per centage of strength of longitudinal joint 77 working pressure of shell by rules 60

Size of manholes in shell 16 x 12 size of compensating rings Angle iron 3 1/2 x 3 1/2 x 1/2

No. of Furnaces in each boiler two outside diameter 28" length, top 5' 9" bottom 7' 3"

Thickness of plates 3/8 description of joint double butt part welded if rings are fitted no greatest length between rings —

Working pressure of furnace by the rules 64

Combustion chamber plating, thickness, sides 7/16 back 7/16 top 7/16

Pitch of stays to ditto, sides 9" back 9" top 9"

If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 67

Diameter of stays at smallest part 1 1/8 working pressure of ditto by rules 74

End plates in steam space, thickness 9/16 pitch of stays to ditto 13 how stays are secured double nuts & large washers

Working pressure by rules 71 diameter of stays at smallest part 1 3/4 working pressure by rules 84

Front plates at bottom, thickness 7/16 Back plates, thickness 9/16 greatest pitch of stays 10 working pressure by rules 73

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Diameter of tubes 3" pitch of tubes 4 1/4 thickness of tube plates, front 9 1/16 back 9 1/16  
How stayed 12 Stay lugs pitch of stays 12 3/4 width of water spaces 11 1/2  
Diameter of Superheater or Steam chest — length —  
Thickness of plates — description of longitudinal joint — diameter of rivet holes — pitch of rivets —  
Working pressure of shell by rules — 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 — How stayed —  
Superheater or steam chest; how connected to boiler — The boiler is fixed below the upper deck

DONKEY BOILER—

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 —  
If fitted with casing gear — If steam from main boilers can enter the donkey boiler —  
Diameter of donkey boiler — length — description of riveting —  
thickness of shell plates — diameter of rivet holes — whether punched or drilled —  
pitch of rivets — lap of plating — per centage of strength of joint —  
thickness of crown plates — stayed by —  
Diameter of furnace, top — bottom — length of furnace —  
thickness of 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 plates — thickness of water tubes —

The foregoing is a correct description,  
Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. The safety valves were set to blow off at 60 lbs per square inch. The boiler was then found to be in a good working condition.  
It is submitted that this vessel is eligible to remain as classed.

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Jm 29/1/85

The amount of Entry Fee .. £ : : received by me,  
Special 2/1/85 .. £ : :  
Certificate (if required) .. £ 2 : 2 : 12/12/85  
To be sent as per margin.  
(Travelling Expenses, if any, £ )

Committee's Minute TUESDAY 8 FEB 1885 18

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



Lloyd's Register Foundation