

# REPORT ON MACHINERY.

3899

No. 3899

Port of

Received at London Office 6 SEPT 1888

No. in Survey held at

Ketherton & Cardiff

Date, first Survey 13<sup>th</sup> July

Last Survey 30<sup>th</sup> Aug. 1888

Reg. Book.

187 on the Iron screw steamer Canton

(Number of Visits 5)

Tons 1176  
1826

Master Park

Built at Newcastle

By whom built C. Mitchell & Co.

When built 1869

Engines made at Newcastle

By whom made Thompson, Boyd & Co.

when made 1869

Boilers made at Newcastle

By whom made Thompson, Boyd & Co.

when made 1878

Registered Horse Power 150

Owners Casfield & Robson

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	Diam. of Tunnel shaft	Diam. of Crank shaft journals	Diam. 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		
Where 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.—

Number of Boilers	Description	Whether Steel or Iron
Working Pressure	Tested by hydraulic pressure to	Date of test
Description of superheating apparatus or steam chest		
Can each boiler be worked separately	Can the superheater be shut off and the boiler worked separately	
Area of square feet of fire grate surface in each boiler	Description of safety valves	No. to each boiler
No. of each valve	Are they fitted with easing gear	No. of safety valves to superheater
Are they fitted with easing gear	Smallest distance between boilers and bunkers or woodwork	area of each valve
Length of boilers	description of riveting of shell long. seams	circum. seams
Diameter of rivet holes	whether punched or drilled	pitch of rivets
Percentage of strength of longitudinal joint	working pressure of shell by rules	size of manholes in shell
No. of compensating rings		No. of Furnaces in each boiler
Inside diameter	length, top	bottom
Thickness of plates	description of joint	if rings are fitted
Test length between rings	working pressure of furnace by the rules	combustion chamber plating, thickness, sides
Back	top	working pressure of plating by
No. of stays to ditto, sides	back	top
If stays are fitted with nuts or riveted heads		
Diameter of stays at smallest part	working pressure of ditto by rules	end plates in steam space, thickness
No. of stays to ditto	how stays are secured	working pressure by rules
diameter of stays at		
Smallest part	working pressure by rules	Front plates at bottom, thickness
Back plates, thickness		
Test pitch of stays	working pressure by rules	Diameter of tubes
pitch of tubes		thickness of tube
Plates, front	back	how stayed
pitch of stays		width of water spaces
Diameter of Superheater or Steam chest	length	thickness of plates
description of longitudinal joint		diam. of rivet holes
No. of rivets	working pressure of shell by rules	diameter of flue
thickness of plates		If stiffened with rings
Space between rings	working pressure by rules	end plates of superheater, or steam chest; thickness
how stayed		
Superheater or steam chest; how connected to boiler		

DONKEY BOILER— Description *Vertical 4 galloway tubes*  
Made at *Kelkerton* by whom made *H & J Danks* when made *1888* where fixed *in stokehold*  
Working pressure *70 lb* tested by hydraulic pressure to *140 lb* No. of Certificate *7.9* fire grate area *25.22 sq. ft.* description of safety  
valves *spring loaded* No. of safety valves *2* area of each *7.06 sq. ft.* if fitted with easing gear *yes* if steam from main boilers can  
enter the donkey boiler *no* diameter of donkey boiler *6'-9"* length *12'-6"* description of riveting *vert. double riv. lap.*  
Thickness of shell plates *1/2"* diameter of rivet holes *13/16"* whether punched or drilled *drilled* pitch of rivets *2 1/2"* lap of plating *4"*  
per centage of strength of joint *67.5* thickness of crown plates *9/16"* stayed by *6 stays* *2"* effective diameter  
Diameter of furnace, top *5'-4"* bottom *6'-0"* length of furnace *7'-6"* thickness of plates *3/32"* description of joint *single riv. lap.*  
Thickness of furnace crown plates *9/16"* stayed by *6 riv. stays* *2" eff. dia.* working pressure of shell by rules *70.8 lb*  
Working pressure of furnace by rules *72.9 lb* diameter of uptake *20"* thickness of plates *7/16"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,  
on behalf of the Manufacturer.

*Joseph W. Cook Engineering Dept.*  
*West Works St.*  
*Clarke St.*

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

*The workmanship and materials are good, and the boiler has been built according to the drawing herewith attached & approved by the committee. The safety valves were seen blowing off at a pressure of 65 lb per square inch.*

The amount of Entry Fee .. £ - : - : - received by me

Special .. £ - : - : -

Donkey Boiler Fee .. £ *2* : *2* : *0*

Certificate (if required) .. £ : : 18

To be sent as per margin.

(Travelling Expenses, if any, £ *3.15.0*.)

Committee's Minute

*FRIDAY 12 OCT 1888*

*Remains as closed*

*James H. Manors* *Wm. A. Forgie*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Lloyd's Register  
Foundation