

# REPORT ON MACHINERY.

Port of *Leith*

MUN 5 JUN 1899

Received at London Office

To. in Survey held at *Kinghorn + Buentisland* Date, first Survey *28<sup>th</sup> June 1898* Last Survey *31<sup>st</sup> May 1899*

Book. on the *S.S. Cloughton* (Number of Vents *33*)

Master *W. Williams* Built at *Kinghorn* By whom built *John Scott + Co* Tons { Gross *469.0* Net *79.21* When built *1899*

Machinery made at *Kinghorn* By whom made *John Scott + Co* when made *1899*

Engines made at *do* By whom made *do* when made *1899*

Registered Horse Power *184* Owners *The Corporation of Birkenhead* Port belonging to *Liverpool*

Net Horse Power as per Section 28 *184*

MACHINERY, &c. — Description of Engines *Triple expansion on four cranks* No. of Cylinders *4*

Diameter of Cylinders *17"-23"-29"-29"* Length of Stroke *18"* Revolutions per minute *160* Diameter of Screw shaft as per rule *7.14"* as fitted *7.18"*

Diameter of Tunnel shaft as per rule *6.46"* Diameter of Crank shaft journals *6.8"* Diameter of Crank pin *7"* Size of Crank webs *8"x5"*

Diameter of screw *7'-6"* Pitch of screw *8' 9"* No. of blades *3* State whether moveable *no* Total surface *176*

No. of Feed pumps *2* Diameter of ditto *9x5 1/2"* Stroke *12"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* Diameter of ditto *4"* Stroke *4 1/2"* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *1* Sizes of Pumps *6"x4"x6"* No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *Face 2" dt.* In Holds, &c. *Two to each hold 2" dt. + one to*

Each wing compartment *2" dt.*

No. of bilge injections *1* sizes *6"* Connected to condenser, or to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes*

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 *none*

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*

Are all pipes 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 *yes*

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

Were stern tube, propeller, screw shaft, and all connections examined in dry dock *new vessel* Is the screw shaft *bulkhead* watertight *yes*

Are they fitted with a watertight door *yes* worked from *deck*

BOILERS, &c. — (Letter for record *S.*) Total Heating Surface of Boilers *3450* sq ft

No. and Description of Boilers *2 Multitubular, Admiralty type* Working Pressure *170 lbs* Tested by hydraulic pressure to *340 lbs*

Can each boiler be worked separately *yes* Area of fire grate in each boiler *53* sq ft No. and Description of safety valves to boiler *Two, spring*

Area of each valve *5.94* sq in Pressure to which they are adjusted *170 lbs* Are they fitted with easing gear *yes* Smallest distance between boilers *on uptakes and bunkers on woodwork* *12"* Mean diameter of boilers *10' 0"*

Material of shell plates *Steel* Thickness *5 1/4"* Description of riveting: circum. seams *Lap J. + B. Rivet* long. seams *BS J. Rivet*

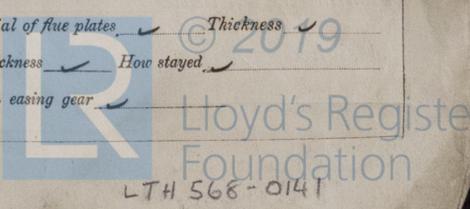
Diameter of rivet holes in long. seams *15/16"* Pitch of rivets *6 5/8"* Lap of plates or width of butt straps *14 3/4"*

Percentages of strength of longitudinal joint rivets *93.5* Working pressure of shell by rules *181 lbs* Size of manhole in shell *16" x 12"*

Material of compensating ring *no nails* No. and Description of Furnaces in each boiler *3. Four* Material *Steel* Outside diameter *42"*

Thickness of plain part top *1 1/2"* Thickness of plates crown *1 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *✓*

Working pressure of furnace by the rules *179 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *✓* Top *5/8"* Bottom *9/16"*



**DONKEY BOILER**— Description *None.*

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 \_\_\_\_\_

enter the donkey boiler \_\_\_\_\_ Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_

Description of riveting long. seams \_\_\_\_\_ Diameter 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 \_\_\_\_\_ Description \_\_\_\_\_

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. *per. John Red Manager*

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

Dates of Survey while building

During progress of work in shops - -	1899. June 28. July 5. Aug. 2. 4. 11. 25. Sept. 8. 20. 26. Oct. 11. 21. Nov. 2. 10. 16. Dec. 2. 16.
During erection on board vessel - -	20. 25. 29. 1899. Jan 17. Feb 3. 7. 13. 23. Mar 3. 20. Apr 7. 28. May 8. 17. 22. 25. 31.
Total No. of visits	33.

The engines + boilers of this vessel have been constructed under special survey + the materials + workmanship are found + good. The engines have been tried under steam + the boiler safety valves adjusted at the working pressure. The machinery is now in good order + safe working condition + eligible in my opinion to have the notation of + L M C 5,99.

The approved boiler trading is forwarded herewith. This vessel is fitted with electric light the same in all respects as the sister vessel Lancashire + a report for the two vessels was forwarded with the reports on the Lancashire.

It is submitted that this vessel is eligible for THE RECORD.

+ L M C 5,99 Blue Light

*TH*  
6/6/99

Certificate (if required) to be sent to

The amount of Entry Fee. . . . .	£ 2 : - : -	When applied for,
Special . . . . .	£ 27 : 12 : -	18. 99.
Donkey Boiler Fee. . . . .	£ - : - : -	When received,
Travelling Expenses (if any) £	4 : 5 : 6	18. 99.

*TH*  
6/6/99  
Thomas Field.  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 6 JUN 1899

CERTIFICATE WRITTEN.

Assigned

+ L M C 5,99  
Elect. light

**VESSEL**

These particulars

Signal Letters (if any) \_\_\_\_\_

Official Number \_\_\_\_\_

110 5 8

No., Date, and Port of Origin \_\_\_\_\_

Whether British or Foreign Built. \_\_\_\_\_

British

Number of Decks \_\_\_\_\_

Number of Masts \_\_\_\_\_

Rigged ... \_\_\_\_\_

Stern ... \_\_\_\_\_

Build ... \_\_\_\_\_

Galleries ... \_\_\_\_\_

Head ... \_\_\_\_\_

Framework and d. vessel ... \_\_\_\_\_

Number of Bulkheads \_\_\_\_\_

Number of water tanks and their capacity \_\_\_\_\_

Total to quarter ton at side amidships

No. of Engines	Description
Two sets	Triple expansion
4 to each set	4 crank
	Yarrow
	Swedish
	Boiler
	Number ...
	Iron or Steel ...
	Pressure when ...

Gross Tonnage

Under Tonnage Decks

Closed-in spaces above

Space or spaces below

Poop ...

Forecastle ...

Round House

Other closed-in spaces

Gross Tonnage

Deductions, as per ...

Registered

Name of Master

No. of Owners

Name, Residence, and Address

The Mayor  
the B  
m

Dated June

R S & Co—10708—3604  
P7811—287

