

REPORT ON MACHINERY.

Port of *Leith*

MUN 5 JUN 1899

Received at London Office

To. in Survey held at *Kinghorn + Buentsland* Date, first Survey *28th June 1898* Last Survey *31st May 1899*
Book. (Number of Vents *33*)

on the *S. S. Cloughton*

Tons { Gross *469.0*
Net *79.21*

Master *W. Williams* Built at *Kinghorn* By whom built *John Scott + Co* 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*

Horse Power as per Section 28. *184*

ENGINES, &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"*

Diameter of Tunnel shaft as fitted *6 5/8"* Diameter of Crank shaft journals *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 *9 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 *Fore 2" dr.* In Holds, &c. *Two to each hold 2" dr. + one to*

Each wing compartment *2" dr.*

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 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 *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 bunks *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* Is the screw shaft *bulkhead* watertight *yes*

Are the stern tube, propeller, screw shaft, and all connections examined in dry dock *new vessel*

Are the fittings with a watertight doors *yes* worked from *deck*

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

and Description of Boilers *2 Multitubular, Admiralty type* Working Pressure *170 lbs* Tested by hydraulic pressure to *340 lbs*

of test *29.12.98* Can each boiler be worked separately *yes* Area of fire grate in each boiler *53 sq* No. and Description of safety valves to

boiler *Two, spring* Area of each valve *3.94 sq* Pressure to which they are adjusted *170 lbs* Are they fitted

easing gear *yes* Smallest distance between boilers *on uptakes and bunks on woodwork* *12"* Mean diameter of boilers *10' 0"*

with *16' 9"* Material of shell plates *Steel* Thickness *5 1/4"* Description of riveting: circum. seams *Lap S. & B. Rivet* long. seams *SBS 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 *93.5* Working pressure of shell by rules *181 lbs* Size of manhole in shell *16"x12"*

No. of compensating ring *Mc Neil* 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 *bottom 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"*

No. of stays to ditto: Sides *8"x8"* Back *✓* Top *✓* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *171 lbs*

Material of stays *Steel* Diameter at smallest part *1.4"* Area supported by each stay *64 sq* Working pressure by rules *175 lbs* End plates in steam space:

Material *Steel* Thickness *1 3/32"* Pitch of stays *16"x16"* How are stays secured *S. & B. Rivet* Working pressure by rules *220 lbs* Material of stays *Steel*

Area at smallest part *5.05 sq* Area supported by each stay *256 sq* Working pressure by rules *197 lbs* Material of Front plates at bottom *Steel*

Thickness *7/8"* Material of Lower back plate *✓* Thickness *✓* Greatest pitch of stays *✓* Working pressure of plate by rules *✓*

Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2"x4 3/8"* Material of tube plates *Steel* Thickness: Front *3/4"* Back *15/16"* Mean pitch of stays *8 7/8"*

Across wide water spaces *14"* Working pressures by rules *247 lbs* Girders to Chamber tops: Material *Steel* Depth and

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 Wren 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

6/6/99

Certificate (if required) to be sent to

The amount of Entry Fee. £ 2 : - : -
Special £ 27 : 12 : -
Donkey Boiler Fee £ - : - : -
Travelling Expenses (if any) £ 4 : 5 : 6

When applied for,

When received,

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

VES

These particulars

Signal Letters (if

Official Number

110 5 8

No., Date, and Port

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 b

and their capacity

Total to quarter the
at side amidships

No. of
Engines

Descri

Two

sets

4 to

each

set

Triple

4 crank

Yarrow

Boiler

Number...

Iron or Steel...

Pressure when

Gross

Under Tonnage De

Closed-in spaces abo

Space or spaces l

Poop ...

Forecastle ...

Round House

Other closed-in s

Gross Ton

Deductions, as per

Registered

Name of Ma

No. of Owners

Name, Residence, a

The May

the B

m

Dated June

R S & Co—16708—3664

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Foundation