

REPORT ON MACHINERY.

No. *S523*

Received at London Office **FRIDAY 19 OCT 1883**

No. in Survey held at *Glasgow* Date, first Survey *12.12.82* Last Survey *15th Oct. 1883*
Reg. Book. on the *S.S. "Burslem"* (Number of Visits *10*) Tons *403.21*
250.30

Master *Barck* Built at *Glasgow* By whom built *Russell & Co.* When built *1883*
Engines made at *Glasgow* By whom made *Alley & Maclellan* when made *1883*
Boilers made at *Glasgow* By whom made *Penman & Co.* when made *1883*
Registered Horse Power *60* Owners *Eturia Steamship Coy.* Port belonging to *Middlesbrough*

ENGINES, &c.—

Description of Engines *Compound Inverted Direct Acting.*
Diameter of Cylinders *18" 8.36"* Length of Stroke *24"* No. of Rev. per minute *88* Point of Cut off, High Pressure *Var* Low Pressure *—*
Diameter of Screw shaft *6 1/2"* Diam. of Tunnel shaft *6 1/2"* Diam. of Crank shaft journals *6 1/2"* Diam. of Crank pin *6 1/2"* size of Crank webs *4 3/4" x 8"*
Diameter of screw *9'-0"* Pitch of screw *14'-0"* No. of blades *4* state whether moveable *sol* total surface *24.5 ft.*
No. of Feed pumps *One* diameter of ditto *3"* Stroke *12"* Can one be overhauled while the other is at work *—*
No. of Bilge pumps *One* diameter of ditto *3"* Stroke *12"* Can one be overhauled while the other is at work *—*
Where do they pump from *All Compartments.*
No. of Donkey Engines *One* Size of Pumps *4" x 9" stroke* Where do they pump from *Tank, Sea Bilge and Hatch.*
Are all the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*
No. of bilge injections *One* and sizes *3"* Are they connected to condenser, or to circulating pump *Cir pump.*
How are the pumps worked *by Levers.*
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 *about.*
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.*
What pipes are carried through the bunkers *none* How are they protected *—*
Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes.*
Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*
When were stern tube, propeller, screw shaft, and all connections examined in dry dock *before launching*
Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Upper platform*

BOILERS, &c.—

Number of Boilers *One* Description *Round Multitubular* Whether Steel or Iron *Part*
Working Pressure *75 lbs.* Tested by hydraulic pressure to *150 lbs.* Date of test *1st May 1883*
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 *36'* Description of safety valves *direct spring* No. to each boiler *two*
Area of each valve *11.04"* Are they fitted with easing gear *yes* No. of safety valves to superheater *—* area of each valve *—*
Are they fitted with easing gear *—* Smallest distance between boilers and bunkers or woodwork *9"* Diameter of boilers *11'-0"*
Length of boilers *9'-0"* description of riveting of shell long. seams *Treb. Lap.* circum. seams *double lap.* Thickness of shell plates *3/4"*
Diameter of rivet holes *1 1/8"* whether punched or drilled *drill.* pitch of rivets *4 3/8"* Lap of plating *9"*
Per centage of strength of longitudinal joint *75%* working pressure of shell by rules *75 lbs.* size of manholes in shell *12" x 16"*
Size of compensating rings *5" ring 3/4" thick.* No. of Furnaces in each boiler *two*
Outside diameter *3'-4"* length, top *6'-0"* bottom *8'-4"* thickness of plates *1/2"* description of joint *Lap.* if rings are fitted *L. Drca*
Greatest length between rings *6'-0"* working pressure of furnace by the rules *92 lbs.* combustion chamber plating, thickness, sides *7/16* back *7/16* top *7/16*
Pitch of stays to ditto, sides *8 1/4"* back *8 1/4"* top *4 x 9 1/2"* If stays are fitted with nuts or riveted heads *Nuts.* working pressure of plating by rules *79 lbs.* Diameter of stays at smallest part *1 1/8"* working pressure of ditto by rules *88 lbs.* end plates in steam space, thickness *7/8"*
Pitch of stays to ditto *14 1/2" x 14 1/2"* how stays are secured *by nuts & rivets.* working pressure by rules *83 lbs.* diameter of stays at smallest part *2"* working pressure by rules *92 lbs.* Front plates at bottom, thickness *7/8"* Back plates, thickness *7/8"*
Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3 1/2"* pitch of tubes *4 1/2"* thickness of tube plates, front *7/8"* back *7/8"* how stayed *stayed* pitch of stays *9"* width of water spaces *6"*
Diameter of Superheater or Steam chest *—* length *—* thickness of plates *—* description of longitudinal joint *—* diam. 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 *—*

State if Report is also sent on the Hull of the Ship.

GRK 391-0014



DONKEY BOILER— Description *Vertical with Cross Tubes.*
 Made at *Glasgow* by whom made *Penman & Co.* when made *1883* where fixed *Stoke hold.*
 Working pressure *40 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *1017.* fire grate area *10 sq. ft.* description of safety valves *direct spring* No. of safety valves *One* area of each *7* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *no* diameter of donkey boiler *4'-0"* length *9'-0"* description of riveting *single & double*
 Thickness of shell plates *7/16* diameter of rivet holes *3/16* whether punched or drilled *Run* pitch of rivets *3 1/4* lap of plating *3 1/4*
 per centage of strength of joint *75* thickness of crown plates *1/2"* stayed by *3 stays 2" diam*
 Diameter of furnace, top *36"* bottom *3'-6"* length of furnace *5'-0"* thickness of plates *1/2"* description of joint *Lap.*
 Thickness of furnace crown plates *1/2"* stayed by *3 stays 2" diameter* working pressure of shell by rules *114 lbs*
 Working pressure of furnace by rules *100 lbs* diameter of uptake *9" to 14"* thickness of plates *7/16* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *One set Top and Bottom End Bolts. Two Main Bearing Bolts. One set Coupling Bolts. One set Feed and Bridge Pump valves. One set Piston Springs. Bolts and Nuts assorted. Iron plates and Bars of various sizes.*

The foregoing is a correct description,
Ally Macmillan Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The above mentioned Engine and Boilers are now completed onboard in a satisfactory manner of good workmanship and material. The Machinery is now in my opinion in a good and safe working condition and eligible to be noted in Register Book: * L.M.C. 10.83.*

It is submitted that this vessel is eligible to have the notation + L.M.C. 10.83 recorded.
 J.S.
 22/10/83

The amount of Entry Fee .. £ 1 : 0 : 0 received by me,
 Special £ 9 : 0 : 0
 Donkey Boiler Fee £ 0 : 0 : 0
 Certificate (if required) .. £ 0 : 0 : 0 *14/10/1883*
 To be sent as per margin.
 (Travelling Expenses, if any, £ 1 : 1 : 5)

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

TUESDAY 23 OCT 1883

Committee's Minute

+ L.M.C. 10.83

