

REPORT ON MACHINERY.

No. *6864*

Received at London Office *6 MARCH 1885*

No. in Survey held at *Glasgow Paisley* Date, first Survey *3rd October 1884* Last Survey *19th Feb 1885*
 Reg. Book. on the *S. S. Primrose* (Number of Visits *18*) Tons *262.48*
 Master *R. D. Roberts* Built at *Paisley* By whom built *H. McIntyre & Co* When built *1884-5*
 Engines made at *Glasgow* By whom made *Hutson & Corbett* when made *1884-5*
 Boilers made at *do.* By whom made *do* when made *do.*
 Registered Horse Power *44.* Owners *R. Hughes & Co* Port belonging to *Liverpool*

ENGINES, &c.—

Description of Engines *Compound Inverted Direct Acting.*
 Diameter of Cylinders *17" x 32"* Length of Stroke *22"* No. of Rev. per minute *100* Point of Cut off, High Pressure *3/4"* Low Pressure *5/8"*
 Diameter of Screw shaft *5 3/4"* Diam. of Tunnel shaft *5 1/2"* Diam. of Crank shaft journals *5 3/4"* Diam. of Crank pin *5 3/4"* size of Crank webs *7" x 3 3/4"*
 Diameter of screw *7-3"* Pitch of screw *11 to 14 ft.* No. of blades *4* state whether moveable *Sol.* total surface *19.5 sq ft.*
 No. of Feed pumps *One* diameter of ditto *2"* Stroke *22"* Can one be overhauled while the other is at work
 No. of Bilge pumps *One* diameter of ditto *2"* Stroke *22"* 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 *7" Cyl. 8" stroke 3 3/4" dia* Where do they pump from *Hotwell, sea, bilges and tank.*
 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 *Circulating pump.*
 How are the pumps worked *direct from low pressure engine crosshead*
 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 *on stocks before launching*
 Is the screw shaft tunnel watertight *none* and fitted with a sluice door worked from

BOILERS, &c.—

Number of Boilers *One* Description *Multitubular* Whether Steel or Iron *Steel.*
 Working Pressure *80 lbs.* Tested by hydraulic pressure to *160 lbs.* Date of test *22nd December 1884.*
 Description of superheating apparatus or steam chest *Horizontal dome*
 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 *27.* Description of safety valves *direct spring* No. to each boiler *two*
 Area of each valve *7"* 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~~ *12"* Diameter of boilers *10'-0"*
 Length of boilers *9'-6"* description of riveting of shell long. seams *treb. riv.* circum. seams *double riv.* Thickness of shell plates *3 3/4"*
 Diameter of rivet holes *5/16"* whether punched or drilled *drilled* pitch of rivets *3 3/4"* Lap of plating *7 3/4"*
 Per centage of strength of longitudinal joint *75.* working pressure of shell by rules *83 lbs.* size of manholes in shell *12" x 15"*
 Size of compensating rings *3/4" ring 6 1/2" broad* No. of Furnaces in each boiler *two*
 Outside diameter *38"* length, top *6'-6"* bottom *9'-0"* thickness of plates *1/2"* description of joint *double butt* if rings are fitted *L Iron*
 Greatest length between rings *6'-6"* working pressure of furnace by the rules *90 lbs.* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *1/2"*
 Pitch of stays to ditto, sides *9" x 9"* back *9" x 9"* top *9" x 10"* If stays are fitted with nuts or riveted heads *nuts inside* working pressure of plating by rules *95 lbs.* Diameter of stays at smallest part *1.2"* working pressure of ditto by rules *118 lbs.* end plates in steam space, thickness *1/16"*
 Pitch of stays to ditto *14 1/2" x 14 1/2"* how stays are secured *d. nuts* working pressure by rules *80 lbs.* diameter of stays at smallest part *2 1/8" bar* working pressure by rules *126 lbs.* Front plates at bottom, thickness *10/16"* Back plates, thickness *10/16"*
 Greatest pitch of stays working pressure by rules Diameter of tubes *3 1/2"* pitch of tubes *4 3/4"* thickness of tube plates, front *1/16"* back *10/16"* how stayed *Stubbs* pitch of stays *9 1/2" x 14 1/2"* width of water spaces *6"*
 Diameter of Superheater or Steam chest *33"* length *3'-6"* thickness of plates *7/16"* description of longitudinal joint *lap* diam. of rivet holes *7/8"*
 Pitch of rivets *2 1/4"* 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, on steam chest; thickness *13/16"* how stayed *One stay*
 Through centre *2 1/2" diameter* Superheater or steam chest; how connected to boiler *throat double riv.*



6867 gen

DONKEY BOILER - Description *Vertical with cross tubes.*
 Made at *Glasgow* by whom made *Hutson & Corbett* when made *1884* where fixed *Stitchfold*
 Working pressure *50 lbs* tested by hydraulic pressure to *100 lb.* No. of Certificate *1535* fire grate area *9'-0"* description of safety
 valves *direct spring* No. of safety valves *one* area of each *4"* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no.* diameter of donkey boiler *4'-0"* length *8'-0"* description of riveting *single lap*
 Thickness of shell plates *3/8 in* diameter of rivet holes *13/16* whether punched or drilled *punch* pitch of rivets *2 1/8* lap of plating *2 1/2*
 per centage of strength of joint *61.* thickness of crown plates *7/16* stayed by *Five stays 1 1/2" diameter*
 Diameter of furnace, top *3'-1 1/2"* bottom *3'-8"* length of furnace *4'-0"* thickness of plates *7/16* description of joint *single la*
 Thickness of furnace crown plates *7/16* stayed by *as above and by uptake* working pressure of shell by rules *4*
 Working pressure of furnace by rules *94 lbs.* diameter of uptake *12"* thickness of plates *3/8* thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied: - *Top and bottom end bolts and nuts.*
One set coupling bolts. Two main bearing bolts.
Feed bridge and donkey valves. One set piston springs.
Bolts nuts & iron assorted.
 The foregoing is a correct description,
Hutson & Corbett Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The above mentioned Engines*
and boilers are now completed on board in a satisfactory
manner and the machinery is now in my opinion
in a good and efficient working condition and
eligible to be noted in The Register Book:
**L.M.C. 2. 85.*

The shafting has been inspected by me while being rough
turned and finished and is as far as can be seen
sound & good.

The amount of Entry Fee .. £ 1: .. ✓ received by me,
 Special £ 8: .. ✓
 Donkey Boiler Fee £ ..: .. ✓
 Certificate (if required) .. £ ..: .. ✓ 3/3/ 1885
 (To be sent as per margin.)
 (Travelling Expenses, if any, £ ..: .. ✓)
 Committee's Minute

FRIDAY 6 MARCH 1885
 + [Signature]

Submitted this 2nd day of March 1885
is eligible to be noted in the Register Book
 [Signature] M.D.
 6.3.85
 John Sanderson
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 Glasgow.

