

# REPORT ON MACHINERY.

5462

No. *5317* Port of *Dundee* Received at London Office *MON. 2 DEC 1889*  
 No. in Survey held at *Dundee* Date, first Survey *2<sup>nd</sup> August* Last Survey *26<sup>th</sup> Nov. 1889*  
 Reg. No. *381* on the *Iron Screw Steamer Martin* (Number of Visits *12*) Tons *995*  
 Master *L Mitchell & Co* Built at *Newcastle* By whom built *L Mitchell & Co* When built *1875*  
 Engine made at *Newcastle* By whom made *Thompson & Co. Nee* when made *1875*  
 Boiler made at *Dundee* By whom made *Gourlay Bros & Co.* when made *1889*  
 Registered Horse Power *180* Owners *General Steam Navigation Co. 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 *Fwd* diameter of *ditto* Stroke Can one be overhauled while the other is at work  
 No. of *Back* diameter of *ditto* Stroke Can one be overhauled while the other is at work  
 Where do *they* from  
 No. of *Don* Size of *Pumps* Where do they pump from  
 Are all the *roses* fitted with *roses* Are the *roses* always accessible Are the *sluices* on *Engine room bulkheads* always accessible  
 No. of *bilges* and sizes Are they connected to *condenser*, or to *circulating pump*  
 How are *they*  
 Are all *connections* the sea direct on the skin of the ship Are they *Valves or Cocks*  
 Are they *discharge* 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 *discharge valve* always accessible on the *plating of the vessel* Are the *blow off cocks* fitted with a *spigot and brass covering plate*  
 What *protection* through the *bunkers* How are they *protected*  
 Are all *valves, and pumps* in connection with the *machinery* accessible at all times  
 Are the *valves* arranged so as to prevent an unintentional connection between the sea and the *bilges*  
 When *propeller, screw shaft, and all connections* examined in *dry dock*  
 Is the *seal* *watertight* and fitted with a *sluice door* worked from

## BOILER

Number *One* Description *Circular tubular* Whether Steel or Iron *Steel, better of material (O.)*  
 Work *60 ft* Tested by hydraulic pressure to *320 ft* Date of test *26/11/89*  
 Description *None*  
 Can *be* *worked separately* Can the *superheater* be shut off and the boiler worked separately  
 No. of *fire grate surface* in each boiler *70 sqft.* Description of *safety valves* No. to each boiler  
 Area *Are they fitted with casing gear* No. of *safety valves* to *superheater* area of each valve  
 Are *they* *gearing* *Smallest distance* between *boilers* and *bunkers or woodwork* Diameter of *boilers* *14' 6"*  
 Length of *boilers* description of *riveting of shell long. seams* *Double straps* circum. seams *Treble riv. lap* Thickness of *shell plates* *1 1/4"*  
 Diameter of *boilers* *15 1/16"* whether *punched or drilled* *Drilled* pitch of *rivets* *8 3/4"* Lap of *plating* *20 1/8" s traps.*  
 Per cent *of longitudinal joint* *85% x 92%* working pressure of *shell by rules* *158* size of *manholes* in *shell* *16" x 13"*  
 Size of *boilers* *4' x 4' x 3/4"* No. of *Furnaces* in each boiler *Four*  
 Outside *diameter* *1' 0"* length, top *6' 10 1/2"* bottom *6' 10 1/2"* thickness of *plates* *7/16 + 3/16* description of *joint* *Purvis's patent* if *rings* are fitted *Yes*  
 Circumference *between rings* *9"* working pressure of *furnace by the rules* *159 1/2* combustion chamber *plating, thickness, sides* *9/16"* back *9/16"* top *19/16"*  
 Pitch of *boilers* *7 3/4" x 7 3/4"* back *7 3/4" x 7 3/4"* top *7 3/4" x 7 3/4"* If *stays* are fitted with *nuts or riveted heads* *Nuts* working pressure of *plating by*  
 rules *Diameter of stays at smallest part* *1 1/2" x 1 3/8"* working pressure of *ditto by rules* *198 1/4* end *plates* in *steam space, thickness* *1/16"*  
 Pitch of *boilers* *15 1/2" x 16"* how *stays* are secured *by double nuts* working pressure by rules *158 1/4* diameter of *stays at*  
 top *2 3/8"* working pressure by rules *159 1/2* Front *plates* at *bottom, thickness* *11/16"* Back *plates, thickness* *5/8"*  
 Great *ends* *13* working pressure by rules *Diameter of tubes* *3 1/4"* pitch of *tubes* *4 1/2" x 4 1/2"* thickness of *tube*  
 plates *11/16"* back *11/16"* how *stayed* *stay tubes* pitch of *stays* *9" x 9"* width of *water spaces* *7"*  
 Diam. of *superheater or Steam chest* length thickness of *plates* description of *longitudinal joint* diam. of *rivet holes*  
 Pitch of *boilers* 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



*DONKEY BOILER—Description*

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	if fitted with easing gear	if steam from main boilers can
enter the donkey boiler	diameter of donkey boiler	length	description of riveting	
Thickness of shell plates	diameter of rivet holes	whether punched or drilled	pitch of rivets	lap of plating
per centage of strength of joint	thickness of crown plates	stayed by		
Diameter of furnace, top	bottom	length of furnace	thickness of plates	description of 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 plates	thickness of water tubes	

**SPARE GEAR.** State the articles supplied :—

*The foregoing is a correct description,*

*Manufacturer.*

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

This boiler is made of steel which according to the test certificate, has been tested at the steel works by one of the Society's surveyors. The material and workmanship are good.

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

Special . . . . £ 5 : 5 :

Donkey Boiler Fee .. £ : :

Certificate (if required) . . £ : : 28/6 1889

To be sent as per margin.

(Travelling Expenses, if any, £ .....

### Committee's Minute

TUES. 28 APR 1891

FRI. 13 FEB 1891

Not for Council

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

The logo for Lloyds Register of Shipping. It features the text "Lloyds Register of" in a serif font, with "Shipping" in a smaller font below it. A large, stylized "LR" monogram is prominently displayed in the center, with the "L" and "R" overlapping. The background is a light blue with a subtle grid pattern.

Lloyd's Register  
Foundation