

# REPORT ON MACHINERY.

9020

No. 9020

Received at London Office, November, 5th 1885.

No. in Survey held at *Asy. & Port Glasgow* Date, first Survey *25th May 1885* Last Survey *29th Oct. 1885*  
 Reg. Book. on the *S.S. "Captain McBlure"* (Number of Visits *33*) *503.45*  
 Tons *304.22*  
 er *Dalton* Built at *Port Glasgow* By whom built *Murdoch & Co. Glasgow* When built *1885*  
 Engines made at *Asy.* By whom made *J. & S. Young* when made *1885*  
 Boilers made at *Asy.* By whom made *Asy.* when made *1885*  
 Registered Horse Power *90* Owners *Michael Murphy Jr.* Port belonging to *Dublin*

## ENGINES, &c.—

Description of Engines *Compound Inverted Direct Acting*  
 Diameter of Cylinders *24 & 45"* Length of Stroke *30"* No. of Rev. per minute *80* Point of Cut off, High Pressure *19"* Low Pressure *19"*  
 Diameter of Screw shaft *8"* Diam. of Tunnel shaft *4 1/2"* Diam. of Crank shaft journals *8"* Diam. of Crank pin *8"* size of Crank webs *10 x 5"*  
 Diameter of screw *11.6"* Pitch of screw *16.0"* No. of blades *four* state whether moveable *yes* total surface *38 sq. feet.*  
 No. of Feed pumps *two* diameter of ditto *2 3/4"* Stroke *15"* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *two* diameter of ditto *2 3/4"* Stroke *15"* Can one be overhauled while the other is at work *yes*  
 Where do they pump from *Engine Room & Cargo Holds.*  
 No. of Donkey Engines *one* Size of Pumps *5 x 5" Stroke* Where do they pump from *Sea Ballast Tanks & Bilges*  
 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 *1/4"* Are they connected to condenser, or to circulating pump *Circulating pump.*  
 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 *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*  
 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 slip before vessel was launched*  
 Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Engine Room mid platform.*

## BOILERS, &c.—

Number of Boilers *One* Description *Round Horizontal Multitubular* Whether Steel or Iron *Steel*  
 Working Pressure *80 lbs* Tested by hydraulic pressure to *160 lbs per sq. in.* Date of test *21st September 1885*  
 Description of superheating apparatus or steam chest *Horizontal Receiver.*  
 In each boiler worked separately *—* Can the superheater be shut off and the boiler worked separately *—*  
 of fire grate surface in each boiler *57.5* Description of safety valves *Direct spring* No. to each boiler *Five*  
 are *15.9 sq. ft.* Are they fitted with easing gear *yes* No. of safety valves to superheater *—* area of each valve *5 to 7 from bunker sheet*  
 ed with easing gear *—* Smallest distance between boilers and bunkers or woodwork *9" from bunkers* Diameter of boilers *13.3"*  
 of boilers *10.0"* description of riveting of shell long. seams *Double butt strap* circum. seams *Double* Thickness of shell plates *1 1/2"*  
 meter of rivet holes *15.0"* rivets whether punched or drilled *punched* pitch of rivets *4"* Lap of plating *13 1/2" straps*  
 ercentage of strength of longitudinal joint *76.5* working pressure of shell by rules *82 lbs* size of manholes in shell *16" x 12"*  
 Size of compensating rings *6" x 5/8"* No. of Furnaces in each boiler *Three*  
 Outside diameter *41"* length, top *6.6"* bottom *9.3"* thickness of plates *1/2"* description of joint *Double butt strap* if rings are fitted *London*  
 Greatest length between rings *—* working pressure of furnace by the rules *84 lbs* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *1/2"*  
 Pitch of stays to ditto, sides *9 1/4" x 9 1/8"* back *9 1/2" x 9 1/2"* top *9 1/4" x 8"* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *80 lbs* Diameter of stays at smallest part *1 1/2" steel* working pressure of ditto by rules *101 lbs* end plates in steam space, thickness *3/4"*  
 Pitch of stays to ditto *15 3/4" x 15 3/4"* how stays are secured *Double nuts* working pressure by rules *81 lbs* diameter of stays at smallest *1 1/2" steel* working pressure by rules *80 lbs* Front plates at bottom, thickness *5/8"* Back plates, thickness *5/8"*  
 ch of stays *11"* working pressure by rules *99 lbs* Diameter of tubes *3 1/2"* pitch of tubes *4 5/8" x 4 5/8"* thickness of tube *5/8"*  
 plates, front *5/8"* back *5/8"* how stayed *stay tubes* pitch of stays *13 1/2" x 13 1/4" x 9"* width of water spaces *5 1/2" to 9 1/2"*  
 Diameter of Superheater or Steam chest *29"* length *4.6"* thickness of plates *1/2"* description of longitudinal joint *Lap double* diam. of rivet holes *3/16"*  
 Pitch of rivets *3"* working pressure of shell by rules *174 lbs* 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 *5/8"* how stayed *no stays fitted*  
*ends disted.* Superheater or steam chest; how connected to boiler *By neck piece 3/4" thick*



**DONKEY BOILER**— Description *Painted Upright Steel*  
Made at *Edinburgh* by whom made *J. & T. Young* when made *1885* where fixed *Stobocholm*  
Working pressure *60 lb.* tested by hydraulic pressure to *120 lb.* No. of Certificate *217* fire grate area *13 square feet* description of safety  
valves *Direct spring* No. of safety valves *one* area of each *7.66 sq. in.* if fitted with easing gear *yes* if steam from main boilers can  
enter the donkey boiler *no* diameter of donkey boiler *5.0* length *10.6* description of riveting *Lap double & single*  
Thickness of shell plates *5/16* diameter of rivet holes *3/16* whether punched or drilled *punched* pitch of rivets *2 7/8 in. lap of plating 4 1/2*  
per centage of strength of joint *71* thickness of crown plates *3/16* stayed by *Six 1 3/4 bar stays.*  
Diameter of furnace, top *4.3* bottom *4.6* length of furnace *5.0* thickness of plates *1/2* description of joint *Lap single*  
Thickness of furnace crown plates *3/16* stayed by *as above* working pressure of shell by rules *71 lb.*  
Working pressure of furnace by rules *60 lb.* diameter of uptake *12 3/4* thickness of plates *3/8* thickness of water tube *3/8 dia*

**SPARE GEAR.** State the articles supplied:— *2 top end and 2 bottom end bolts & nuts 2 main beam  
bolts 1 set of coupling bolts. Food & Bidge pump valves. a quantity of bolts & nuts  
iron assorted 12 studs and nuts for propeller blades.*

The foregoing is a correct description,

*J. & T. Young* Manufacturer.

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

*The Engines and Boilers have been specially surveyed during  
construction. Workmanship of good quality. Shafts examined when being  
turned in lathe and found satisfactory. The Machinery and Boilers have  
satisfactorily tested under full steam and are now in good order and in  
working condition and are in my opinion eligible to be noted in the Log  
Book. L.M.C. 10. 85.*

*It is submitted that this  
vessel is eligible to transfer  
& L.M.C. recorded  
M 5/11/85*

The amount of Entry Fee ... £ 1 : 0 : 0 received by me,

Special ... £ 13 : 10 : 0

Donkey Boiler Fee ... £ :

Certificate (if required) ... £ *gratis* 4<sup>th</sup> Nov. 1885

To be sent as per margin.

(Travelling Expenses, if any, £ 8 : 13 : 4)

Committee's Minute Friday, November 6<sup>th</sup> 1885.

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

*Greenock District*