

# REPORT ON MACHINERY.

9020

No. 9020

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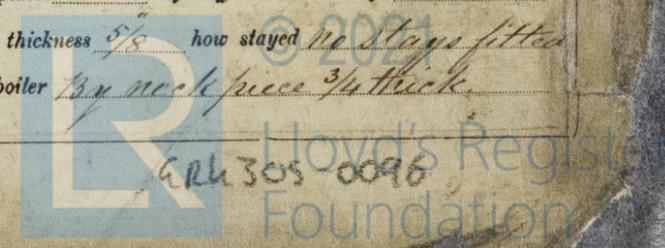
No. in Survey held at Apoy & Port Glasgow Date, first Survey 25th May 1885 Last Survey 29th Oct. 1885  
 Reg. Book. \_\_\_\_\_ (Number of Visits 33) \_\_\_\_\_ Tons 503.45  
 on the S.S. "Captain McBlure" \_\_\_\_\_ Tons 304.22  
 er Dalton Built at Port Glasgow By whom built Murdoch & Murray When built 1885  
 Engines made at Apoy By whom made J & J. Young when made 1885  
 Boilers made at Apoy By whom made do when made 1885  
 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 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 via 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 Date of test 21st September 1885  
 Description of superheating apparatus or steam chest Horizontal Receiver  
 Are the boilers worked separately no Can the superheater be shut off and the boiler worked separately no  
 Area of fire grate surface in each boiler 57.5 Description of safety valves Direct spring No. to each boiler Five  
 Diameter of each valve 15.9 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 from bunkers Diameter of boilers 13.3  
 Diameter of boilers 10.0 description of riveting of shell long. seams Double butt strap circum. seams Double Thickness of shell plates 16  
 Diameter of rivet holes 15 rivets whether punched or drilled punched pitch of rivets 4 Lap of plating 13 1/2 Straps  
 Percentage 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 on bottom  
 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 1/2 x 9 1/2 back 9 1/2 x 9 1/2 top 9 1/2 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 part 1 1/2 steel working pressure by rules 80 lbs Front plates at bottom, thickness 5/8 Back plates, thickness 5/8  
 Pitch 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 plates, front 5/8 back 5/8 how stayed stay tubes pitch of stays 13 1/2 x 13 1/2 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 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 dished. Superheater or steam chest; how connected to boiler by neck piece 3/4 thick



**DONKEY BOILER**— Description *Plain Upright Steel*  
 Made at *Adur* by whom made *J. & T. Young* when made *1885* where fixed *Hoboken*  
 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 *7.60* 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, 2 feed & bridge 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 bath 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 be noted  
 & L.M.C. recorded  
 M 5/11/85*

*Accepted*

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)

*J.W.*

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

Committee's Minute Friday, November 6<sup>th</sup> 1885.  
*+ J.W.*

