

# REPORT ON MACHINERY.

8943

No. 8943 Port of Glasgow  
 No. in Survey held at Glasgow Date, first Survey 10<sup>th</sup> Jan<sup>y</sup> 1888 Last Survey Dec<sup>r</sup> 21<sup>st</sup> 1888  
 Reg. Book. 297 on the L S Benarty Received at London Office. 29 DEC 1888  
 (Number of Visits 11) Tons 1424  
1119  
 Master L Bonillion Built at Glasgow By whom built Barclay Curle & Co When built 1876  
 Engines made at Glasgow By whom made Barclay Curle & Co when made 1876  
 Boilers made at Do By whom made Do when made 1876  
 Registered Horse Power 190 Owners W. Thompson & Co Port belonging to Lith.

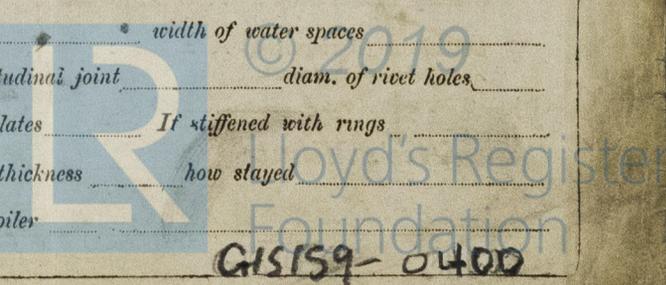
## ENGINES, &c.—

Description of Engines S.S. No 2.85  
IMC 485-13811.85  
 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 Feed pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Where do they pump from \_\_\_\_\_  
 No. of Donkey Engines \_\_\_\_\_ Size of Pumps \_\_\_\_\_ Where do they pump from \_\_\_\_\_  
 Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_  
 No. of bilge injections \_\_\_\_\_ and sizes \_\_\_\_\_ Are they connected to condenser, or to circulating pump \_\_\_\_\_  
 How are the pumps worked \_\_\_\_\_  
 Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 Are they fixed sufficiently high 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 each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_ Are the blow off cocks fitted with a spigot and brass covering plate \_\_\_\_\_  
 What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times \_\_\_\_\_  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges \_\_\_\_\_  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_  
 Is the screw shaft tunnel watertight \_\_\_\_\_ and fitted with a sluice door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—

Number of Boilers \_\_\_\_\_ Description \_\_\_\_\_ Whether Steel or Iron \_\_\_\_\_  
 Working Pressure \_\_\_\_\_ Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_  
 Description of superheating apparatus or steam chest \_\_\_\_\_  
 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 \_\_\_\_\_ Description of safety valves \_\_\_\_\_ No. to each boiler \_\_\_\_\_  
 Area of each valve \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_ No. of safety valves to superheater \_\_\_\_\_ area of each valve \_\_\_\_\_  
 Are they fitted with easing gear \_\_\_\_\_ Smallest distance between boilers and bunkers or woodwork \_\_\_\_\_ Diameter of boilers \_\_\_\_\_  
 Length of boilers \_\_\_\_\_ description of riveting of shell long. seams \_\_\_\_\_ circum. seams \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_  
 Diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_  
 Percentage of strength of longitudinal joint \_\_\_\_\_ working pressure of shell by rules \_\_\_\_\_ size of manholes in shell \_\_\_\_\_  
 Size of compensating rings \_\_\_\_\_ No. of Furnaces in each boiler \_\_\_\_\_  
 Outside diameter \_\_\_\_\_ length, top \_\_\_\_\_ bottom \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of joint \_\_\_\_\_ if rings are fitted \_\_\_\_\_  
 Greatest length between rings \_\_\_\_\_ working pressure of furnace by the rules \_\_\_\_\_ combustion chamber plating, thickness, sides \_\_\_\_\_ back \_\_\_\_\_ top \_\_\_\_\_  
 Pitch of stays to ditto, sides \_\_\_\_\_ back \_\_\_\_\_ top \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ working pressure of plating by \_\_\_\_\_  
 rules \_\_\_\_\_ Diameter of stays at smallest part \_\_\_\_\_ working pressure of ditto by rules \_\_\_\_\_ end plates in steam space, thickness \_\_\_\_\_  
 Pitch of stays to ditto \_\_\_\_\_ how stays are secured \_\_\_\_\_ working pressure by rules \_\_\_\_\_ diameter of stays at \_\_\_\_\_  
 smallest part \_\_\_\_\_ working pressure by rules \_\_\_\_\_ Front plates at bottom, thickness \_\_\_\_\_ Back plates, thickness \_\_\_\_\_  
 Greatest pitch of stays \_\_\_\_\_ working pressure by rules \_\_\_\_\_ Diameter of tubes \_\_\_\_\_ pitch of tubes \_\_\_\_\_ thickness of tube \_\_\_\_\_  
 plates, front \_\_\_\_\_ back \_\_\_\_\_ how stayed \_\_\_\_\_ pitch of stays \_\_\_\_\_ width of water spaces \_\_\_\_\_  
 of Superheater or Steam chest \_\_\_\_\_ length \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of longitudinal joint \_\_\_\_\_ diam. of rivet holes \_\_\_\_\_  
 \_\_\_\_\_ working pressure of shell by rules \_\_\_\_\_ diameter of flue \_\_\_\_\_ thickness of plates \_\_\_\_\_ If stiffened with rings \_\_\_\_\_  
 \_\_\_\_\_ 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



8943 gls

**DONKEY BOILER**— Description *Cylindrical. Multitubular.*  
 Made at *Glasgow* by whom made *Ross & Duncan* when made *1888* where fixed *on deck*  
 Working pressure *150 lb* tested by hydraulic pressure to *125 lb* No. of Certificate *198 (London)* fire grate area *-* description of safety  
 valves *Spring loaded (Empire)* No. of safety valves *Pair* area of each *-* if fitted with easing gear *Yes* if steam from main boilers can  
 enter the donkey boiler *No* diameter of donkey boiler *6-9"* length *7-0"* description of riveting *Butt. treble*  
 Thickness of shell plates *5/8"* diameter of rivet holes *7/8"* whether punched or drilled *Drilled* pitch of rivets *5 1/2"* lap of plating  
 per centage of strength of joint *84* thickness of ~~iron~~ plates *3/4"* with *1/2"* doubling stayed by *Steel stay 2" diam. 12 pitch*  
 Diameter of furnace, top *38"* bottom *-* length of furnace *4-9"* thickness of plates *2 1/32"* description of joint *Butt*  
 Thickness of furnace ~~iron~~ plates *17/32"* stayed by *1/4" curved stay 7 1/2 pitch* working pressure of shell by rules *150 lb*  
 Working pressure of furnace by rules *150 lb* diameter of ~~water~~ tubes *3"* thickness of plates *3/4" x 1/16"* 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 was originally intended for a new vessel, and has been constructed under special orders and is of good material & workmanship. On account of the great hurry in delivery we did not witness the usual hydraulic test, but I am informed by the makers that the boiler was satisfactorily tested before leaving their works. It has now been forwarded to London to be used as a donkey boiler on board the S.S. "Benarty" and to work at 70 lb per sq. inch.

It is submitted that this vessel is eligible to remain as classed.

Md  
31.12.88

The amount of Entry Fee . . . £ : :  
 Special . . . £ : :  
 Donkey Boiler Fee . . . £ 2 : 2 :  
 Certificate (if required) . . . £ : :  
 (To be sent as per margin.)  
 (Travelling Expenses, if any, £ . . .)

received *at Gls*  
*24/1/89*  
*9/1/89*  
*18*

Walter J. Robson  
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Committee's Minute  
*Remain as classed*

TUES 1 JAN 1889

FRIDAY 4 OCT 1889

FRIDAY 21 FEB 1889  
Lloyd's Register  
FRIDAY 14 FEB 1889  
Foundation