

REPORT ON MACHINERY.

No. 6802

Received at London Office THURSDAY 15 JAN 11

No. in Survey held at Glasgow Date, first Survey 14th Feb^y 1884 Last Survey 13th January 1885
 Reg. Book. on the S S Glamorganshire (Number of Tons 2832.58) Tons 1842.67
 Master Williams Built at Glasgow By whom built The London & Glasgow Co^l Ltd When built 1884
 Engines made at Glasgow By whom made The London & Glasgow Co^l Ltd when made 1884
 Boilers made at Do By whom made Do when made 1884
 Registered Horse Power 450 Owners Jenkins & Co Port belonging to London

ENGINES, &c.—

Description of Engines Inverted Direct acting Compound Surface Condensing
 Diameter of Cylinders 43 & 78 Length of Stroke 54 No. of Rev. per minute 58 Point of Cut off, High Pressure 42¹/₂ Low Pressure
 Diameter of Screw shaft 14¹/₂ Diam. of Tunnel shaft 13³/₄ Diam. of Crank shaft journals 14¹/₂ Diam. of Crank pin 14¹/₂ size of Crank webs 20 x 10
 Diameter of screw 17¹/₄ Pitch of screw 20¹/₄ No. of blades Four state whether moveable Yes total surface 85 sq ft
 No. of Feed pumps Two diameter of ditto 5¹/₄ Stroke 30 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two diameter of ditto 4¹/₂ Stroke 30 Can one be overhauled while the other is at work Yes
 Where do they pump from Engine room bilges & holds
 No. of Donkey Engines Two Size of Pumps 6 x 5 x 10 & 10¹/₂ x 9 x 10 Where do they pump from Donkey from bilges, holds, holdwell + sea. Ballast from sea & tanks also connected to condenser.
 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 6 Are they connected to condenser, or to circulating pump Circulating
 How are the pumps worked By levers from 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 Below
 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 Main steam + bilge pipes & manholes How are they protected Steam pipes by iron casing others by wood.
 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 Before vessel was launched
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Engine room platform at deck

BOILERS, &c.—

Number of Boilers Two Description Cylindrical Mult-Drum ended Whether Steel or Iron Steel, except steam chest which is of iron
 Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 29-10-84
 Description of superheating apparatus or steam chest Horizontal
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately Yes
 No. of square feet of fire grate surface in each boiler 1150 sq ft Description of safety valves Direct spring No. to each boiler Two
 Area of each valve 30 sq in Are they fitted with easing gear Yes No. of safety valves to superheater — area of each valve —
 Are they fitted with easing gear Yes Smallest distance between boilers and bunkers of woodwork 12" Diameter of boilers 14-0
 Length of boilers 17-2 description of riveting of shell long. seams Two rows Butt circum. seams Lap, double Thickness of shell plates 27/32
 Diameter of rivet holes 1¹/₁₆ whether punched or drilled Drilled pitch of rivets 5¹/₂ x 2³/₄ Lap of plating 1-0¹/₂ butt strap
 Percentage of strength of longitudinal joint 80 working pressure of shell by rules 103 lbs size of manholes in shell 16 x 12
 No. of compensating rings 78 plate double riveted No. of Furnaces in each boiler Six
 Outside diameter 3-6¹/₂ length, top 6-9 bottom 16-9 thickness of plates 17/32 description of joint Butt & weld if rings are fitted Yes
 Greatest length between rings 6-6 working pressure of furnace by the rules 92 lbs combustion chamber plating, thickness, sides 1/2" back — top 3/2"
 Pitch of stays to ditto, sides 8¹/₄ back — top 8¹/₄ If stays are fitted with nuts or riveted heads Nuts working pressure of plating —
 rules 100 + 113/16 Diameter of stays at smallest part 1³/₈ working pressure of ditto by rules 105 lbs end plates in steam space, thickness 27/32
 Pitch of stays to ditto 16¹/₂ how stays are secured Nuts working pressure by rules 96 lbs diameter of stays at smallest part 2¹/₄ working pressure by rules 130 lbs Front plates at bottom, thickness 7/8 Back plates, thickness —
 Greatest pitch of stays — working pressure by rules — Diameter of tubes 3¹/₂ pitch of tubes 4³/₄ thickness of tube plates, front 3/4" back 1/16" how stayed Tubes pitch of stays 14¹/₂ x 9¹/₂ width of water spaces 5
 Diameter of Superheater or Steam chest 4-3 length 17-2 thickness of plates 5/16 description of longitudinal joint Lap-double diam. of rivet holes 13/16
 Pitch of rivets 3¹/₂ working pressure of shell by rules 115 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 By angles 3 x 3
 and gusset plates — Superheater or steam chest; how connected to boiler Two necks 13 dia. 3/16 in plate

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DONKEY BOILER— Description: *Shell boiler, flat sided, iron shell. Furnace in front of boiler.*
 Made at *Glasgow* by whom made *London & Glasgow Co* when made *1884* where fixed *Under deck*
 Working pressure *50 lb* tested by hydraulic pressure to *100 lb* No. of Certificate *1451* fire grate area *18 sq ft* description of safety valves *Direct spring*
 No. of safety valves *Two* area of each *7 sq ins* if fitted with easing gear *eyes* if steam from main boiler
 enter the donkey boiler *No* diameter of donkey boiler *4-4* length *8-6 x 9-9* description of riveting *Lap - double*
 Thickness of shell plates *7/16 iron* diameter of rivet holes *13/16* whether punched or drilled *Punch* pitch of rivets *3 3/8* lap of plating *4 1/2*
 per centage of strength of joint *73* thickness of ^{comb cham} crown plates *7/16 steel* stayed by *1 1/2 iron rod stays, pitch 9 3/4 x 9 1/2* *Pennings = 57* *6 1/2 lb stays*
 Diameter of furnace, top *40* bottom *-* length of furnace *6-3* thickness of plates *7/16 steel* description of joint *Butt & weld*
 Thickness of ^{end} furnace crown plates *5/32* stayed by *1 1/2 solid steel stays, pitch 12 x 12 1/2* *Pennings = 50* *plate* working pressure of shell by rules *90 lb*
 Working pressure of furnace by rules *68 lb* diameter of ^{tube} uptake *3 1/2* thickness of ^{tube} plates *15/32* *13 1/2* thickness of water tubes *✓*

THE GEAR. State the articles supplied:— *Cast crank shaft - One propeller complete - One propeller shaft - 2 iron metal crank pin bushes - Six boiler tubes - One valve spindle & guide - One air line circulating pump rod - Feed & bilge pump valves - Set of coupling bolts - 4 sp & 4 iron end connecting rod bolts - Two holding down bolts - 20 rivets, bolts, nuts, iron &c.*

The foregoing is a correct description,
 made at *Glasgow* by *London & Glasgow Co* Manufacturer.

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

These engines & boilers have been constructed under special survey - they are of good material and workmanship - they have been well fitted on board - satisfactorily tested under steam & I am of opinion they are eligible to be classed "REGISTERED" 1-85 in the Register Book.

Appended hereto are the Reports on forgings & steel - also the approved tracing of main boiler.

The amount of Entry Fee .. £ 3 : 0 : 0 received by me,
 Special £ 42 : 10 : 0
 Donkey Boiler Fee £ .. : .. : ..
 Certificate (if required) .. £ .. : .. : .. 14/11 1885
 To be sent as per margin.
 Travelling Expenses, if any, £ 8/-)

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

Committee's Minute

FRIDAY 10 JAN 1885

[Signature]

