

REPORT ON MACHINERY.

26786 Iron

No. 4808 (Received in London Office 8/6/80)
 No. in Survey held at Greenock Date, first Survey March 26th 1880 Last Survey May 28th 1880
 Reg. Book. Greenock
 on the Iron S.S. "Redland" Tons 115.8
 Master J. G. Morgan Built at Campbeltown When built 1849/80
 Engines made at Greenock By whom made Kinnaird, Donald & Co. when made 1880
 Boilers made at Ladyburn, Greenock By whom made Watson & Co. when made 1880
 Registered Horse Power 30 Owners M. Whitwill & Son Port belonging to Bristol

ENGINES, &c.—

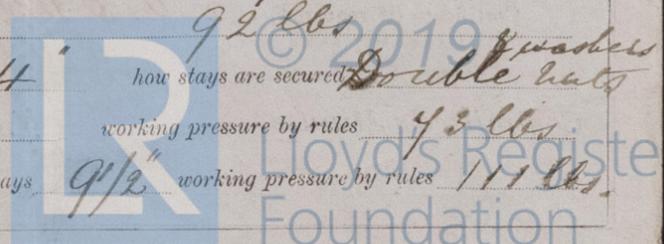
Description of Engines Compound, Inverted, Direct-acting, Surface-condensing
 Diameter of Cylinders 13" & 23 1/2" Length of Stroke 18" No. of Rev. per minute 110 Point of Cut off, High Pressure 1/8 stroke Low Pressure 5/8 stroke
 Diameter of Screw shaft 4 1/4" Diameter of Tunnel shaft 4 1/4" Diameter of Crank shaft journals 4 1/4" Diameter of Crank pin 4 1/4" size of Crank webs 5 1/2" x 9 1/4"
 Diameter of screw 4.2" Pitch of screw 9.6" No. of blades 3 state whether moveable no total surface 12 sq. ft.
 No. of Feed pumps 1 diameter of ditto 2 3/4" Stroke 9" Can one be overhauled while the other is at work no
 No. of Bilge pumps 1 diameter of ditto 2 3/4" Stroke 9" Can one be overhauled while the other is at work no
 Where do they pump from Bilge pumps from bilges and peak tank; feed from hotwell.
 No. of Donkey Engines One Size of Pumps 2 1/4" x 5" Where do they pump from Sea, bilges, hotwell & tank.

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 1 and sizes 2" Are they connected to condenser, or to circulating pump circ.
 How are the pumps worked By levers from main cross heads
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & cocks
 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 no
 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 new ship, on Watson's slipway when they were fitted, May 1880
 Is the screw shaft tunnel watertight no tunnel and fitted with a sluice door no worked from no

BOILERS, &c.—

Number of Boilers One Description Round, horizontal, multitubular
 Working Pressure 65 lbs Tested by hydraulic pressure to 144 lbs Date of test 24th April, 1880
 Description of ~~superheating apparatus or~~ steam chest Vertical steam dome
 Can each boiler be worked separately no Can the superheater be shut off and the boiler worked separately no
 No. of square feet of fire grate surface in ~~each~~ boiler 24 Description of safety valves Direct-spring, (over valves)
 No. to each boiler Two area of each valve 9.6 sq. in. Are they fitted with easing gear Yes
 No. of safety valves to superheater no area of each valve no are they fitted with easing gear no
 Smallest distance between boilers and bunkers or woodwork 4" space between composition & bunkers lagged with wood & s.s. with
 Diameter of boilers 8'0" Length of boilers 4'9" description of riveting of shell long. seams double lap circum. seams single lap
 Thickness of shell plates 9/16" diameter of rivet holes 4/8" whether punched or drilled punched pitch of rivets 3"
 Lap of plating 6" per centage of strength of longitudinal joint 40 working pressure of shell by rules 67 lbs
 Size of manholes in shell 16" x 12" size of compensating rings Angle iron ring 3" x 3" x 1/2"
 No. of Furnaces in ~~each~~ boiler 2 outside diameter 2'5" length, top 5'9" bottom 4'4"
 Thickness of plates 3/8" description of joint double strap if rings are fitted Angle iron at bottom greatest length between rings 5'6"
 Working pressure of furnace by the rules 49 lbs
 Combustion chamber plating, thickness, sides 7/16" back 7/16" top 7/16" (curved)
 Pitch of stays to ditto no sides 8" x 8" back 8" x 8" top curved
 If stays are fitted with nuts or riveted heads Screwed & riveted working pressure of plating by rules 69 lbs
 Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 92 lbs
 End plates in steam space, thickness 5/8" pitch of stays to ditto 14" x 14" how stays are secured Double nuts
 Working pressure by rules 41 lbs diameter of stays at smallest part 1 3/4" working pressure by rules 43 lbs
 Front plates at bottom, thickness 5/8" Back plates, thickness 5/8" greatest pitch of stays 9 1/2" working pressure by rules 111 lbs

[Form No. 8, 2000 8/1/80]



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Diameter of tubes 3" pitch of tubes 4 1/4" x 4 1/4" thickness of tube plates, front 5/8" back 5/8"
 How stayed Tubes pitch of stays 12 3/4" x 12 3/4" width of water spaces 5"
 Diameter of ~~Superheater~~ or Steam chest 3"0" length 3"9"
 Thickness of plates 3/8" description of longitudinal joint Single lap diameter of rivet holes 3/4" pitch of rivets 2 1/4"
 Working pressure of shell by rules 8 3/4 lbs Diameter of flue None thickness of plates
 If stiffened with rings distance between rings Working pressure by rules
 End plates of ~~superheater~~ steam chest; thickness 7/16" How stayed Two 1 3/4" vertical stays
~~Superheater~~ or steam chest; how connected to boiler Strong flange riveted.

DONKEY BOILER— Description No Donkey boiler
 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

The foregoing is a correct description,
 J. Meaid Donald & Co Manufacturers.

General Remarks (State quality of workmanship, opinions as to class, &c. Workmanship and materials good.
 The engines and boilers are in good and efficient condition, the pumping arrangements have been carried out in accordance with plans submitted and approved by the Committee in letter of April 14th 1880, and the vessel is in opinion, eligible to be classed "Lloyd's M.C." and noted 6.80. ? last run 20/5/80

It is submitted that this vessel is eligible to have the notification & by the Reg. 6.80 recorded in the Register Book J.M. 10/6/80

The amount of Entry Fee £ 0 : 0 : 0 received by me,
 Special £ 5 : 0 : 0 order for Receipt January 1880
 Certificate (if required) £ 0 : 0 : 0 5 June 1880
 To be sent as per margin.
 (Travelling Expenses, if any)

Committee's Minute Friday, June, 11th 1880

Alfred H. Alchin
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Greenock

Lloyd's Register Foundation