

REPORT ON MACHINERY.

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No. 5850.

No. in Survey held at Middlebro Date, first Survey 20th April Last Survey 12th Aug 1885.
 Reg. Book. Received at London Office 15 SEPT 1885
 on the Iron Steamer "Sir Robert Peel" (Number of Visits 15) Tons 376.09
 Master J. W. Harlock Built at Middlebro By whom built Messrs. Craggs & Sons when made 1885.
 Engines made at Middlebro By whom made Westgarth, English & Co. when made 1885.
 Boilers made at Middlebro By whom made Westgarth, English & Co. when made 1885.
 Registered Horse Power 50 Owners E. Caiey Port belonging to London.

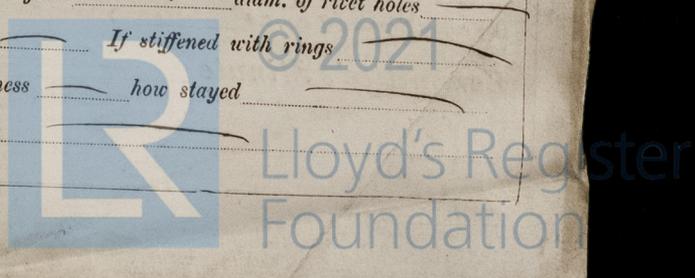
ENGINES, &c.—

Description of Engines Compound, Inverted, 2 Cylinders.
 Diameter of Cylinders 18" x 36" Length of Stroke 24" No. of Rev. per minute 90 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke
 Diameter of Screw shaft 6 1/2" Diam. of Tunnel shaft 6" Diam. of Crank shaft journals 6 1/2" Diam. of Crank pin 6 1/2" size of Crank webs 7 1/2" x 5"
 Diameter of screw 8.9" Pitch of screw 11.0" No. of blades 4 state whether moveable no total surface 24 sq. ft.
 No. of Feed pumps one diameter of ditto 3" Stroke 9" Can one be overhauled while the other is at work
 No. of Bilge pumps one diameter of ditto 3" Stroke 9" Can one be overhauled while the other is at work
 Where do they pump from After well, Engine room & main hold.
 No. of Donkey Engines 2 Size of Pumps (3 x 6") (1 1/2" x 4") Where do they pump from (Bilges of after well, Engine room & main hold.) (sea to donkey boiler)
 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 3" dia. Are they connected to condenser, or to circulating pump Circulating pump.
 How are the pumps worked By levers from the low pressure piston crosshead.
 Are there any 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 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
 How are the pipes 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.
 Have the stern tube, propeller, screw shaft, and all connections examined in dry dock 12th August 1885.
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from upper platform in Engine room.

BOILERS, &c.—

Number of Boilers One Description Cylindrical, built. Single Ended Whether Steel or Iron Steel
 Working Pressure 80 lbs. Tested by hydraulic pressure to 160 lbs. Date of test 26th June 1885.
 Description of superheating apparatus or steam chest none
 Can each boiler be worked separately no Can the superheater be shut off and the boiler worked separately no superheater
 Area of square feet of fire grate surface in each boiler 28.25 Description of safety valves Spring No. to each boiler 2
 Area of each valve 9.62 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 12" Diameter of boilers 11.0"
 Thickness of boilers 9.0" description of riveting of shell long. seams double riv. butt circum. seams double riv. lap Thickness of shell plates 5/8"
 Diameter of rivet holes 15/16" whether punched or drilled drilled pitch of rivets 3 3/4" Lap of plating 4 1/2"
 Percentage of strength of longitudinal joint 75 working pressure of shell by rules 88 lbs. size of manholes in shell 16" x 12"
 Diameter of compensating rings 6" x 7 1/8" No. of Furnaces in each boiler 2
 Inside diameter 3.5" length, top 5.5" bottom 7.6" thickness of plates 1/2" description of joint butt straps if rings are fitted no
 Smallest length between rings — working pressure of furnace by the rules 91 lbs. combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Diameter of stays to ditto, sides 9" x 9" back 9" x 9" top — If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 95 lbs.
 Diameter of stays at smallest part 1 3/16" working pressure of ditto by rules 82 lbs. end plates in steam space, thickness 3/4"
 Diameter of stays to ditto 15 1/2" x 15 1/2" how stays are secured double nuts & washers working pressure by rules 83 lbs. diameter of stays at smallest part 1 7/16"
 Working pressure by rules 82 lbs. Front plates at bottom, thickness 7/8" Back plates, thickness 5/8"
 Smallest pitch of stays 12" working pressure by rules 83 lbs. Diameter of tubes 3 1/2" pitch of tubes 4 3/4" x 4 3/4" thickness of tube 5/8"
 Diameter of tubes, front 5/8" back 5/8" how stayed stay tubes pitch of stays 9 1/2" x 9 1/2" width of water spaces 1 1/4"
 Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —
 Are there any rivets — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —
 Are there any between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —
 Superheater or steam chest; how connected to boiler —

STK 912 - 0140



DONKEY BOILER— Description *Cylindrical, Vertical, 3 Horizontal water tubes*
 Made at *Stockton* by whom made *Riley Bros.* when made *14.7.85* where fixed *In stockhole*
 Working pressure *80 lbs.* tested by hydraulic pressure to *160 lbs.* No. of Certificate *1248* fire grate area *11.04 sq. ft.* description of safety valves *Spring* No. of safety valves *One* area of each *7.07* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *No* diameter of donkey boiler *4.6* length *8.6* description of riveting *double riveted lap*
 Thickness of shell plates *13/32* diameter of rivet holes *13/16* whether punched or drilled *punched* pitch of rivets *3 1/16* lap of plating *5* per centage of strength of joint *71* thickness of crown plates *13/32* stayed by *uptake x 5 vertical stays 1 1/2" dia.*
 Diameter of furnace, top *3.8* bottom *3.11 3/16* length of furnace *3.8* thickness of plates *13/32* description of joint *Single riv. lap.*
 Thickness of furnace crown plates *13/32* stayed by *uptake x 5 vertical stays 1 1/2 dia* working pressure of shell by rules *82 lbs.*
 Working pressure of furnace by rules *82 lbs.* diameter of uptake *12"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *1 Propeller, 2 main bearing bolts, 2 top end x 2 bottom end bolts for connecting rod, 1 set of coupling bolts, 2 sets of springs for the high and low pressure pistons, 1 set of feed-pump valves, 1 bilge pump valves, 2 Escape valve springs for the cylinders, 2 Safety valve springs for the main*
 The foregoing is a correct description,
Westgarth English & Co. Manufacturers of Engines & Main Boilers.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery and boilers of this vessel have been constructed under Special Survey, and the quality of the workmanship is good, they have been tried under steam and found to work well and are now in safe and efficient working condition and eligible, in my opinion, to have the notification L.M.C. 8.85. recorded in the Register of this Society

It is submitted that this vessel is eligible to have the notification recorded 7.8.85 recorded

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The amount of Entry Fee *£ 11 : 0 : 0* received by me,
 Special .. *£ 8 : 0 : 0*
 Donkey Boiler Fee .. *£ " : " : "*
 Certificate (if required) .. *£ " : " : " 12.9.1885*
 To be sent as per margin.

A. Stoddart
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRIDAY 13 SEPT 1885*

