

REPORT ON MACHINERY.

No. 7199 Port of Shull Received at London Office TUES 25 MARCH 1890
 No. in Survey held at Shull Date, first Survey May 28/89 Last Survey 20th Mar 1890
 Reg. Book. 758 on the Sam S. S. South Western (Number of Visits 43) Tons 540.42
 Master London Built at London By whom built J W Dugdon When built 1874
 Engines made at Shull By whom made Earles & Co. Lim when made 1890
 Boilers made at Shull By whom made Earles & Co. Lim when made 1890
 Registered Horse Power 180 Owners London & Western Rail Co Port belonging to Southampton

ES, &c.— (Triple expansion) not Classed
 m of Engines Triple Compound Inverted Direct Acting
 of Cylinders 22.35 1/2. 60 Length of Stroke 39 No. of Rev. per minute 64 Point of Cut off, High Pressure .62 Low Pressure .6
 of Screw shaft 11 1/4 Diam. of Tunnel shaft 10 1/4 Diam. of Crank shaft journals 11 1/4 Diam. of Crank pin 11 1/4 size of Crank webs 13 x 8
 of screw 11.9 Pitch of screw 18.0 No. of blades 4 state whether moveable Yes total surface 57.29 sq ft
 Feed pumps Two diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work Yes
 Bilge pumps Two diameter of ditto 3 Stroke 24 Can one be overhauled while the other is at work Yes
 they pump from Engine room Bilge, Holds & Tunnel.
 Monkey Engines One Size of Pumps Watts 6 x 18 duplex Where do they pump from Bilges, Holds, Tunnel.
Hotwell, Brilers, Condenser & Feed heater.
 the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
 Bilge injections One and sizes 7 Are they connected to condenser, or to circulating pump Circulating Pump
 the pumps worked Circulating Pump separate Engine, Remote from intermediate Engine Room
 connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks both
 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
 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
 pipes are carried through the bunkers Suction to forward How are they protected board cased
 pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes in Engine room
 pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes
 the stern tube, propeller, screw shaft, and all connections examined in dry dock Now new
 screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Main Deck

RS, &c.—
 of Boilers Two Description Cylinder Whether Steel or Iron Steel
 Pressure 160 lb Tested by hydraulic pressure to 520 lb Date of test 10th Dec 1889
 of superheating apparatus or steam chest None fitted
 boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately Yes
 are feet of fire grate surface in each boiler 63.29 sq ft Description of safety valves Spring loaded No. to each boiler Two
 each valve 7.56 sq in Are they fitted with easing gear Yes No. of safety valves to superheater - area of each valve -
 fitted with easing gear - Smallest distance between boilers and bunkers or woodwork 26 Diameter of boilers 12.9
 boilers 11.0 description of riveting of shell long. seams all shop rivets circum. seams all in lap Thickness of shell plates 1 1/8
 of rivet holes 1 1/8 whether punched or drilled drilled pitch of rivets 7 1/8 Lap of plating 16 1/2
 e of strength of longitudinal joint 84.2 % working pressure of shell by rules 161 lb size of manholes in shell 16 x 12
 compensating rings Flanged Ring No. of Furnaces in each boiler Three
 diameter 40 1/2 length, top 7.0 bottom 7.0 thickness of plates 1 1/32 description of joint Welded if rings are fitted Yes
 length between rings longitudinal working pressure of furnace by the rules 160 lb combustion chamber plating, thickness, sides 9/16 back 9/16 top 9/16
 stays to ditto, sides 7 1/2 back 7 1/2 top 7 1/2 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by
73 lb Diameter of stays at smallest part 1 1/4 working pressure of ditto by rules 211 lb end plates in steam space, thickness 1 1/16
 stays to ditto 17 how stays are secured all nuts on nut working pressure by rules 160 lb diameter of stays at
 at part 2 1/2 working pressure by rules 173 lb Front plates at bottom, thickness 1 1/16 Back plates, thickness 1 1/16
 pitch of stays 12 working pressure by rules 160 lb Diameter of tubes 3 1/2 pitch of tubes 4 3/4 thickness of tube
 front 13/16 back 12/16 how stayed stay tubes pitch of stays 1 1/4 in 9 width of water spaces 10
 of Superheater or Steam chest length thickness of plates description of longitudinal joint diam. of rivet holes
 rivets working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings
 between rings working pressure by rules end plates of superheater, or steam chest; thickness how stayed
 Superheater or steam chest; how connected to boiler

Description of furnaces

HULL 402.0154

DONKEY BOILER— Description *Vertical Cylinder Internal Furnace "Blake's Patent"*
Made at *Manchester* by whom made *James Blake* when made *1890* where fixed *Wolverhampton*
Working pressure *160 lb* tested by hydraulic pressure to *320 lb* No. of Certificate *860* fire grate area *—* description of safety
valves *Spring loaded* No. of safety valves *two* area of each *5.14* if fitted with easing gear *Yes* if steam from main boilers can
enter the donkey boiler *No* 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 *—*
Thickness of furnace crown plates *—* stayed by *—*
Working pressure of furnace by rules *—* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

No 860
LLOYD'S TEST.
320 LBS
description of joint
J. S.
working pressure of shell by rules
4. 12. 89
thickness of water tubes

SPARE GEAR. State the articles supplied:— *The top end bolts, Two Bottom end bolts, Two
main bearing bolts, One oil coupling bolts, One oil head and Bilge pump
valve, Safety valve springs, Escape valve springs, Piston springs, Air pump
rod & Buckle, Crank shaft, Propeller shaft, Crank pin hammer, bolts nuts &c*

The foregoing is a correct description,
Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) *Workmanship Good*
W. A. J. Jones
ENGINEER SURVEYOR TO LLOYD'S REGISTER OF SHIPBUILDING & ENGINEERING CO. LIMITED

*The Machinery and Boilers of this vessel have
been constructed under special survey and placed on board
in accordance with the Society's Rules. They are now in my
opinion in safe working condition and the case is respectfully
submitted for the notification + NE + B. 90. + L.M.C. 3. 90. in
the Register Book:*

*It is submitted that this vessel is eligible
to have NE + B. 90. recorded in black.*
W.A.
25.3.90

The amount of Entry Fee .. £ 2 : - : - received *by me*
Special .. £ 27 : - : -
Donkey Boiler Fee .. £ - : - : -
Certificate (if required) .. £ - : - : -
To be sent as per margin.

(Travelling Expenses, if any, £)
Committee's Minute *FRIDAY 28 MARCH 1890* *TUES 1 APRIL 1890*
Not for Comm
James Jones
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
Lloyd's Register Foundation