

# REPORT ON MACHINERY.

Port of Greenock

Received at London Office

THURS 2

1890

No. in Survey held at 10060 Port Glasgow

Date, first Survey 24<sup>th</sup> February 1890 Last Survey 29<sup>th</sup> September 1890

(Number of Visits 72)

Spec. 1412.14

Description of safe Book.  
main boilers on the Junia S.S. "Satellite"

Tons 892.42

Builder S. W. Ogg Built at Port Glasgow By whom built Blackwood & Gordon When built 1890

Machinery made at Port Glasgow By whom made Blackwood & Gordon when made 1890

Engines made at S. By whom made S. when made 1890

Registered Horse Power 200 Owners Companhia Estradas de Ferro Port belonging to Rio de Janeiro

Rules 190

## ENGINES, &c.—

Description of Engines

Number of Cylinders 3 Length of Stroke 36 No. of Rev. per minute 100 Point of Cut off, High Pressure 1/2 Low Pressure 1/2

Diameter of Screw shaft 4 Diam. of Tunnel shaft 4 Diam. of Crank shaft journals 4 Diam. of Crank pin 4 size of Crank webs 4

Diameter of screw 4 Pitch of screw 4 No. of blades 4 state whether moveable 4 total surface 4

Number of Feed pumps 4 diameter of ditto 4 Stroke 4 Can one be overhauled while the other is at work 4

Number of Bilge pumps 4 diameter of ditto 4 Stroke 4 Can one be overhauled while the other is at work 4

Where do they pump from 4

Number of Donkey Engines 4 Size of Pumps 4 Where do they pump from 4

Are all the bilge suction pipes fitted with roses 4 Are the roses always accessible 4 Are the sluices on Engine room bulkheads always accessible 4

Are the bilge injections 4 and sizes 4 Are they connected to condenser, or to circulating pump 4

Are the pumps worked 4

Are all connections with the sea direct on the skin of the ship 4 Are they Valves or Cocks 4

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates 4 Are the discharge pipes above or below the deep water line 4

Are they each fitted with a discharge valve always accessible on the plating of the vessel 4 Are the blow off cocks fitted with a spigot and brass covering plate 4

Are the pipes carried through the bunkers 4 How are they protected 4

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times 4

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges 4

Were stern tube, propeller, screw shaft, and all connections examined in dry dock 4

Is the screw shaft tunnel watertight 4 and fitted with a sluice door 4 worked from 4

## BOILERS, &c.—

Number of Boilers one Description Donkey Boiler Whether Steel or Iron Steel

Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs per sq. in. Date of test 19<sup>th</sup> August 1890

Description of superheating apparatus or steam chest none fitted

Can each boiler be worked separately 4 Can the superheater be shut off and the boiler worked separately 4

Number of square feet of fire grate surface in each boiler 12 1/2 Description of safety valves Direct Spring No. to each boiler one

Area of each valve 7 square in. Are they fitted with easing gear yes No. of safety valves to superheater 4 area of each valve 4

Are they fitted with easing gear 4 Smallest distance between boilers and bunkers or woodwork Boiler fixed under deck. Diameter of boilers 7 1/2

Thickness of shell plates 7/16 description of riveting of shell long. seams Lap double circum. seams Lap single Thickness of shell plates 7/16

Diameter of rivet holes 13/16 whether punched or drilled drilled pitch of rivets 2 3/4 long Lap of plating 4 5/8

Percentage of strength of longitudinal joint 70 working pressure of shell by rules 80 lbs size of manholes in shell 14 x 11

Number of compensating rings 4 3/4 x 3/4 No. of Furnaces in each boiler one plain

Internal diameter 36 length, top 5 1/2 bottom 6 1/2 thickness of plates 13/32 description of joint D.B. strap if rings are fitted no

Least length between rings 4 working pressure of furnace by the rules 80 lbs combustion chamber plating, thickness, sides 7/16 back 7/16 top 7/16

Number of stays to ditto, sides 8 back 8 x 8 top 8 If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 84 lbs

Diameter of stays at smallest part 1 1/2 working pressure of ditto by rules 80 lbs end plates in steam space, thickness 5/8

Number of stays to ditto 13 x 10 how stays are secured double nuts working pressure by rules 82 lbs diameter of stays at smallest part 1 5/16

Working pressure by rules 83 lbs Front plates at bottom, thickness 9/16 Back plates, thickness 1/2

Least pitch of stays 8 working pressure by rules 120 lbs Diameter of tubes 3 pitch of tubes 4 1/2 x 4 1/4 thickness of tube

Plating, front 9/16 back 5/8 how stayed Stay tubes pitch of stays 8 1/2 x 12 3/4 width of water spaces 6

Diameter of Superheater or Steam chest 4 length 4 thickness of plates 4 description of longitudinal joint 4 diam. of rivet holes 4

Number of rivets 4 working pressure of shell by rules 4 diameter of flue 4 thickness of plates 4 If stiffened with rings 4

Space between rings 4 working pressure by rules 4 end plates of superheater, or steam chest; thickness 4 how stayed 4

Superheater or steam chest; how connected to boiler 4

DONKEY BOILER— Description

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

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Blackwood & Sons Manufacturer.

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

The amount of Entry Fee £ 2 : : received by me,

Special £ 28 : 10 :

Donkey Boiler Fee £ 4 : 4 :

Certificate (if required) £ gratis: 29/9/1890.

To be sent as per margin.

(Travelling Expenses, if any, £ )

FRI 3 OCT 1890

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

A. C. Heron  
Greenock District

Committee's Minute