

# REPORT ON MACHINERY.

9917

No. 9917 Port of Greenock Received at London Office MON 14 APRIL 1890  
 No. in Survey held at Port Glasgow Date, first Survey 5<sup>th</sup> November Last Survey 15<sup>th</sup> April 1890  
 Reg. Book. 25 on the S.S. "Vauban" (Number of Visits 50) Grm 1552.90  
 Master E. Roy Built at Port Glasgow By whom built W. Hamilton & Co. When built 1890  
 Engines made at Port Glasgow By whom made Blackwood & Gordon when made 1890  
 Boilers made at do By whom made do when made 1890  
 Registered Horse Power 150 Owners Maurel & H. Prou Port belonging to Bordeaux  
Rule N.P. 147

## ENGINES, &c.—

(Triple expansion)  
 Description of Engines Compound Inverted, Direct Acting, Triple Expansion  
 Diameter of Cylinders 19.30 & 14.9 Length of Stroke 36" No. of Rev. per minute 92 Point of Cut off, High Pressure 23" 1 P 23" Low Pressure 23"  
 Diameter of Screw shaft 10" Diam. of Tunnel shaft 9 1/2" Diam. of Crank shaft journals 10" Diam. of Crank pins 10" size of Crank webs 13 1/2" x 6 1/2"  
 Diameter of screw 12.0 Pitch of screw 13.6 No. of blades 4 state whether moveable no total surface 44.7 sq ft  
 No. of Feed pumps Two diameter of ditto 2 1/2" Stroke 18" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work yes  
 Where do they pump from Engine room, Cargo Holds, Tunnel well  
 No. of Donkey Engines Two Size of Pumps 3 x 5 duplex, & 6 1/2 x 8 Where do they pump from Small from sea, Hot well  
Tanks, Bilges & Main Boilers, Large from sea, Tanks & Bilges  
 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 4" Are they connected to condenser, or to circulating pump Circulating pump  
 How are the pumps worked By suction for air feed & bilge pumps & Centrifugal pump for circulating water  
 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 part above, part 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 hulkers 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  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock on ship before launching  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from side platform in E. Room

## BOILERS, &c.—

Number of Boilers One Description Round Horizontal An. Hitchin Whether Steel or Iron Steel  
 Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs per sq in Date of test 28<sup>th</sup> February 1890  
 Description of superheating apparatus or steam chest None  
 Can each boiler be worked separately — Can the superheater be shut off and the boiler worked separately —  
 Total heating surface 2,256 square feet  
 No. of square feet of fire grate surface in each boiler 67 Description of safety valves Direct Spring No. to each boiler Two  
 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 or woodwork 13" Diameter of boilers 15.0"  
 Length of boilers 10.6" description of riveting of shell long. seams D & S. table riv. circum. seams 1 double Thickness of shell plates 1 1/2"  
 Diameter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 8 3/4 & 4 3/8 Lap of plating 19 straps  
 Per centage of strength of longitudinal joint 85 working pressure of shell by rules 160 lbs size of manholes in shell 16" x 12"  
 Size of compensating rings 30" x 26" x 1 1/2" No. of Furnaces in each boiler 3, ribbed  
 Outside diameter 46 1/4" length, top 4.6" bottom 9.8" thickness of plates 1 1/2" description of joint Molded if rings are fitted —  
 Greatest length between rings — working pressure of furnace by the rules 163 lbs combustion chamber plating, thickness, sides 5/8" back 5/8" top 5/8"  
 Pitch of stays to ditto, sides 8 1/2" x 8 1/2" back 8 1/2" x 8 1/2" top 8" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 166 lbs Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 163 lbs end plates in steam space, thickness 1 1/2"  
 Pitch of stays to ditto 15 1/4" x 15 1/4" how stays are secured Double nuts working pressure by rules 163 lbs diameter of stays at smallest part 2 3/4" working pressure by rules 162 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 3/4" thickness of tube 3/4"  
 Greatest pitch of stays 12" to 13" working pressure by rules — Diameter of tubes 3 1/4" pitch of tubes 4 1/2" x 4 1/2" thickness of tube 3/4"  
 plates, front 3/4" & 5/8" doubling as wide back 3/4" how stayed Stay tubes pitch of stays 9" x 9" & 13 1/2" width of water spaces —  
 Diameter of Superheater or Steam chest — length — thickness of plates — description of longitudinal joint — diam. of rivet holes —  
 Pitch of rivets — working pressure of shell by rules — 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 — how stayed —  
 Superheater or steam chest; how connected to boiler —

Description of furnaces

GRK 3 14-0062



## DONKEY BOILER—

Description

*See Glasgow Surveyor's report attached.*

Made at

by whom made

when made

where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

fire grate area

description

valves

No. of safety valves

area of each

if fitted with easing gear

if steam from main boiler

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:—

*1 propeller. 1 screw shaft. 1 piston rod. springs for pistons. 1 pair crank pin bushes. 2 pair crosshead bushes. 2 connecting rod top end & 2 bottom end bolts & nuts. 2 main bearing bolts. 1 set coupling bolts. 2 feed & 2 bilge pump valves. 2 slide valve spindles. 2 piston valves for H.P. & I.P.*

The foregoing is a correct description,

*Blackwood & Gordon* Manufacturer.

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

*These Engines and Boilers have been specially surveyed during construction workmanship of good quality. Shafts examined when being turned and found apparently free from defects. Main steam pipe tested by hydraulic pressure to 320 lbs per sq. in. tests satisfactory. The Engines and Boilers are satisfactorily fitted on board and tested under full steam they are now in good order and safe working condition and are in opinion eligible to be noted in the Register Book. L.M.C. 4.90.*

## Spare gear continued.

*8 bushes for valve motion. 3 neck bushes for valve spindles. 3 do for piston rods. 1 air pump bucket and rod. spare gear for centrifugal pump. 2 pump line. 1 feed plunger. 2 sets of slide valves for air pump. 40 tubes for surface condenser with ferrules & packings. 5 piston junk ring bolts. 3 cylinder escape valve springs. 1 do for feed pump. 1 do for main boiler safety valve. 1 do for donkey boiler safety valve. 2 rubber discs for reducing valve. 1 feed check valve for main boiler. 24 plain tubes & 6 stay tubes for main boiler. 1/2 set furnace bars for main boiler & 1 set for donkey boiler. 2 studs for piston rod glands. 2 do for valve spindle glands. 2 do for feed pump glands. 6 do for cylinder cover and valve doors.*

*It is submitted that this vessel is eligible to have L.M.C. 4.90 recorded*

*M.D. 14-4-90*

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

Special .. £ 22 : 0 : -

Donkey Boiler Fee .. £ : - : -

Certificate (if required) .. £ gratis: 11<sup>th</sup> April 1890.

To be sent as per margin.

(Travelling Expenses, if any, £ Nil.)

Committee's Minute

TUES 15 APRIL 1890

+ L.M.C. 4/90

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

Greenock District

Lloyd's Register Foundation