

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 5th November Last Survey 15th April 1890

Reg. Book. 25 on the S.S. "Vauban"

(Number of Visits 50) 1552.90

Tons Regd. 1166.90

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

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 2.3 1 P 2.3" Low Pressure 2.3"

Diameter of Screw shaft 10" Diam. of Tunnel shafts 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 feet

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 pump sea, Hot well

Tanks, Bilges & Main Boilers, Large pump 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 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

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 via platform in E. Room

BOILERS, &c.—

Number of Boilers One Description Round Horizontal An. Mitchell Whether Steel or Iron Steel

Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs per sq. in. Date of test 28th 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. tubular riv. circum. seams 1 double Thickness of shell plates 1 1/2"

Diameter of rivet holes 1 1/2" 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 7.6" bottom 9.8" thickness of plates 1 1/2" description of joint folded if rings are fitted four bottom

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 1/2" 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" 3/8" double skew span

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 plates, front 3/4" 3/8" double skew span back 3/4" how stayed stay tubes pitch of stays 9 x 9 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 —

Form No. 8-2000-3/16/88-T. & S. - Copyable Ink.

Description of furnaces

GIRK 3 14-0062

Lloyd's Register Foundation

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 rods, 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, &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 links, 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 covers 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: 11th 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 & Foreign Shipping.

A. L. Gordon
Greenock District

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Foundation