

REPORT ON MACHINERY.

10348

Port of Greenock

M.D. 28 SEP 1891

Received at London Office 18

10348

Survey held at Port Glasgow

Date, first Survey 4th April 1891 Last Survey 24th Sept. 1891

(Number of Visits 1)

606.69

on the S.S. "Lady Havelock"

Tons 322.41

Builder John C. Whitley Built at Port Glasgow By whom built Blackwood & Gordon When built 1891

Machinery made at Port Glasgow By whom made Blackwood & Gordon when made 1891

Engines made at do By whom made do when made 1891

Registered Horse Power 98 Owners Beyley S.S. Coy. (Lim'd) Port belonging to London

Engines, &c. —

Description of Engines Inverted Direct Acting Triple Expansion

Diameter of Cylinders 15 1/2 25 & 40 Length of Stroke 27 No. of Rev. per minute 135 Point of Cut off, High Pressure 16 Low Pressure 16

Diameter of Screw shaft 7 1/4 Diam. of Tunnel shaft 7 1/2 Diam. of Crank shaft journals 8 Diam. of Crank pin 8 size of Crank webs 10 1/2 x 5 1/2

Diameter of screw 9.6 Pitch of screw 10.0 No. of blades 4 state whether moveable yes total surface 2.8 square feet

No. of Feed pumps Two diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work yes

No. of Bilge pumps Two diameter of ditto 3 Stroke 14 Can one be overhauled while the other is at work yes

Where do they pump from Engine Room, Cargo Holds, Ballast Tanks & Tunnel well.

No. of Donkey Engines Two Size of Pumps 5 x 5 & 3 x 5 Where do they pump from Large from sea, Tanks & Bilges, Small from sea, Engine room Bilge, Hot well & Drain Pails.

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 Are they connected to condenser, or to circulating pump Circulating pump.

How are the pumps worked By levers.

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 in line

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 Bilge & Fuel tank pipes How are they protected Wood casing.

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 she was launched.

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top platform.

Boilers, &c. —

No. of Boilers One Description R.H. Multitubular Whether Steel or Iron Steel.

Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs per sq. in. Date of test 5th August 1891.

Description of superheating apparatus or steam chest None fitted.

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

Heating surface 1836 square feet. Area of square feet of fire grate surface in each boiler 56 Description of safety valves Direct spring No. to each boiler Two.

Area of each valve 7.06 sq. in. Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 11" Diameter of boilers 14.0"

Length of boilers 11.0" description of riveting of shell long. seams D. B. S. treble riv. circum. seams Lap double Thickness of shell plates 1 1/2"

Diameter of rivet holes 1 1/4" whether punched or drilled drilled pitch of rivets 8 5/16 & 9 5/16 Lap of plating 18 1/4 straps

Percentage 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 1/4 No. of Furnaces in each boiler 3

Outside diameter 4.3 length, top 4.9 bottom 10.3 thickness of plates 1/2" description of joint Welded if rings are fitted Yes

Greatest length between rings — working pressure of furnace by the rules 160 lbs combustion chamber plating, thickness, sides 5/8" back 9/16" top 5/8"

Pitch of stays to ditto, sides 8 1/2 x 8 1/2 back 7 1/2 x 7 1/2 top 8 1/2 x 8 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 162 lbs

Diameter of stays at smallest part 1 1/2 1 3/8 & 1 1/2 working pressure of ditto by rules 160 lbs end plates in steam space, thickness 1"

Pitch of stays to ditto 15 x 15 how stays are secured double nuts working pressure by rules 160 lbs diameter of stays at smallest part 2 1/4"

working pressure by rules 160 lbs Front plates at bottom, thickness 3/4" Back plates, thickness 1 1/2" at wide spaces as above

Greatest pitch of stays 12" working pressure by rules 160 lbs Diameter of tubes 3 1/2 pitch of tubes 4 3/4 x 4 3/4 thickness of tube plates, front 3/4 back 3/4 how stayed Stay tubes pitch of stays 9 1/2 x 9 1/2 width of water spaces 6 to 8 inches

Description of furnaces ribbed

416318-0121

Lloyd's Register Foundation

DONKEY BOILER—

Description *See attached Report*

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:— *2 top & 2 bottom end bolts & nuts for connecting rods. 2 Main bearing bolts & nuts. 1 set connecting bolts. 1 set of feed & bilge pump valves. piston rings & springs. 4 bushes for piston valve motion. 2 propeller blades. 2 safety valve springs for Main Boilers. 1 do for Donkey Boiler. a quantity of bolts nuts & iron assorted. 1 set of air pump valves. 1 set of circulating pump valves.*

The foregoing is a correct description,
Blackwood + Gordon Manufacturer.

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

*This vessel's Engines and Boilers have been specially surveyed during construction workmanship good. Shafts examined when being turned and found apparently free from defects. Main steam pipe tested by hydraulic pressure. Engines & Boilers satisfactorily fitted on board and tested under full steam. They are now in good order and safe working condition and are in my opinion eligible to be noted in the Register Book. **LMC. 9.91.***

Spare gear Continued

6 Condenser tubes & 50 screws & glands for same. 4 plain tubes for Main Boiler. 3 relief valve springs for Cylinders. 1 set of furnace bars for Main Boilers

Machinery Certificate Written.

It is submitted that this vessel is eligible for the record + LMC 9.91

The amount of Entry Fee .. £ 2 : - : - received by me,
Special £ 15 : 6 : -
Donkey Boiler Fee £ - : - : -
Certificate (if required) .. £ - : - : - *26th Sep 1891.*
To be sent as per margin.

(Travelling Expenses, if any, £ *Nil.*)
Committee's Minute **TUES. 29 SEP 1891**
+ LMC 9.91

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

