

REPORT ON MACHINERY.

8556

THURSDAY 29 NOV 1883

No. 8556

Received at London Office

No. in Survey held at Port Glasgow Date, first Survey 3rd Aug 82 Last Survey 28th Nov 1883

Reg. Book. on the S.S. "Hera" (Number of Visits 64) Tons 2244.81
1738.14

Master Mancini Built at Port Glasgow By whom built Blackwood & Gordon When built 1883

Engines made at Port Glasgow By whom made " when made 1883

Boilers made at " By whom made " when made 1883

Registered Horse Power 200 Owners Carlo Raggio Port belonging to Genoa

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting

Diameter of Cylinders 35 & 67 Length of Stroke 42 No. of Rev. per minute 65 Point of Cut off, High Pressure 2.8 Low Pressure 2.8

Diameter of Screw shaft 11.2 Diam. of Tunnel shaft 11 Diam. of Crank shaft journals 11.2 Diam. of Crank pin 11.2 size of Crank webs 15 x 7

Diameter of screw 16.0 Pitch of screw 18.0 No. of blades Four state whether moveable yes total surface 68.7 feet

No. of Feed pumps Two diameter of ditto 4 Stroke 21 Can one be overhauled while the other is at work yes

No. of Bilge pumps Two diameter of ditto 4 Stroke 21 Can one be overhauled while the other is at work yes

Where do they pump from Engine Room Cargo Holds & Ballast Tanks

No. of Donkey Engines Two Size of Pumps 9 x 10 1/4 x 8 Where do they pump from Large from Ballast Tanks

and bilges. Small from sea hot well & 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 6 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 above

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 & Ballast tank pipes How are they protected Wood Casement

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 slip before vessel was launched on 24th Sept 1883

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Engine room top platform

BOILERS, &c.—

Number of Boilers Two Description Round Horizontal Multitubular Whether Steel or Iron Iron

Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs per sq in Date of test 13th September 1883

Description of superheating apparatus or steam chest Round Horizontal Reciprocating

Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately No Superheater

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 15.9 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 — Smallest distance between boilers and bunkers or woodwork 9 Diameter of boilers 13.0

Length of boilers 11.0 description of riveting of shell long. seams Double butt strap circum. seams Double Thickness of shell plates 15

Diameter of rivet holes 1 1/16 whether punched or drilled Drilled pitch of rivets 5 Lap of plating 18 straps

Percentage of strength of longitudinal joint 77.5 working pressure of shell by rules 89 lbs size of manholes in shell 16 x 12

Size of compensating rings 3 1/2 x 3 x 9 No. of Furnaces in each boiler Three

Outside diameter 41 length, top 7.9 bottom 10.4 thickness of plates 9/16 description of joint Double butt strap if rings are fitted Yes bottom

Greatest length between rings — working pressure of furnace by the rules 89 lbs combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2

Pitch of stays to ditto, sides 8 x 8 back 8 x 8 top 9 x 8 If stays are fitted with nuts or riveted heads Riveted heads nuts working pressure of plating by rules 100 lbs Diameter of stays at smallest part 1 1/4 working pressure of ditto by rules 102 & 115 end plates in steam space, thickness 3/4

Pitch of stays to ditto 15 x 15 how stays are secured Double nuts working pressure by rules 89 lbs diameter of stays at smallest part 2 working pressure by rules 83 lbs Front plates at bottom, thickness 5/8 Back plates, thickness 5/8

Greatest pitch of stays 9 working pressure by rules 123 lbs Diameter of tubes 3 1/2 pitch of tubes 4 3/4 x 4 3/4 thickness of tube plates, front 5/8 back 5/8 how stayed Stay tubes pitch of stays 11 1/4 x 9 1/2 x 9 1/2 width of water spaces 6

Diameter of Superheater or Steam chest 2.8 length 8.0 thickness of plates 7/16 description of longitudinal joint Lap double diam. of rivet holes 13/16

Pitch of rivets 3 working pressure of shell by rules 150 lbs 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 5/8 how stayed Stay tubes

Lloyd's Register Foundation

CPH 301-0139

DONKEY BOILER— Description *Round Horizontal Multitubular Iron (Dry Combustion Chamber)*
 Made at *Port Glasgow* by whom made *Blackwood & Gordon* when made *1883* where fixed *4 1/2 Deck*
 Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *164* fire grate area *34 sq feet* description of safety
 valves *Direct opening* No. of safety valves *Two* area of each *9.6 sq* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *9.0* length *7.0* description of riveting *Long double butt straps riveted*
 Thickness of shell plates *1/2* diameter of rivet holes *1/4* whether punched or drilled *punched* pitch of rivets *3* lap of plating *8 straps*
 per centage of strength of joint *73* thickness of crown plates *—* stayed by *—*
 Diameter of furnace, top *3 1/2* bottom *—* length of furnace *7.0* thickness of plates *7/16* description of joint *Butt straps*
 Thickness of furnace crown plates *—* stayed by *—* working pressure of shell by rules *60 lbs*
 Working pressure of furnace by rules *68 lbs* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

SPARE GEAR. State the articles supplied:— *1 Half Crank Shaft, 1 Screw Shaft, 1 propeller box with studs & nuts for same,
 1 connecting rod with bottom brass bolts & nuts for both ends & caps, 1 set of coupling bolts, 2 main bearing bolts & nuts,
 1 piston rod, 1 set of piston springs, 1 set of escape valve springs for C. & T. pumps, 1 feed pump rod, 1 air pump rod,
 2 Eccentric rods with brass bolts, 2 Eccentric shafts, 1 H.P. & 1 L.P. slide valve rod, 1 C.P. pump rod, 11 Guide blocks, 4 studs & nuts for
 propeller blades, 4 valves & seats for feed pumps, 4 do for bilge pumps, 2 seat & guards for water
 ballast donkey pump, 1 H.P. & 1 L.P. Cylinder cover, 1 H.P. & 1 L.P. piston packing ring, 1 set of
 rubber valves for air & air pumps, 24 Boiler tubes, 12 Condenser tubes, a quantity of ferrules
 & gaskets for boiler tubes, 1 set of safety valve springs, Bolts nuts & wire assorted to fit & complete*
 The foregoing is a correct description,
Blackwood & Gordon Manufacturers

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Engines & Boilers have been specially surveyed during construction, quality of workmanship good, & the Machinery & Boilers are now in good order and safe working condition and are in my opinion eligible to be noted in the Register Book L.M.C. 11.83.

It is submitted that this vessel is eligible to have the registration + 2 m & 11 53 recorded
 D.P.
 29/11/83

The amount of Entry Fee .. £ 2 : 0 : 0 received by me,
 Special £ 30 : 0 : 0 at
 Donkey Boiler Fee £ 0 : 0 : 0 Greenock }
 Certificate (if required) .. £ gratis: 27/11/1883
 To be sent as per margin.
 (Travelling Expenses, if any, £)

Committee's Minute
 FRIDAY 30 NOV 1883
 + M.L.

Andrew & Gorman
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 Greenock District.

