

# REPORT ON MACHINERY.

No. *8556*

Received at London Office

THURSDAY 29 NOV 1883

No. in Survey held at *Port Glasgow*

Date, first Survey *3<sup>rd</sup> Aug 82* Last Survey *28<sup>th</sup> Nov 83*

Reg. Book.

(Number of Visits *64*)

*2244.81*

on the *S.S. "Hura"*

Tons *1738 14*

Master *Mancini* Built at *Port Glasgow* By whom built *Blackwood & Co. Ltd.* 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 *28* Low Pressure *28*

Diameter of Screw shaft *11 1/2* Diam. of Tunnel shaft *11* Diam. of Crank shaft journals *11 1/2* Diam. of Crank pin *11 3/4* 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 & 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 & 24<sup>th</sup> Septe 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 *13<sup>th</sup> 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 *15.0*

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 9/16* 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 & 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*

Superheater or steam chest; how connected to boiler *Stay tubes*

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 ft high*

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 *9.1* length *7.1* description of riveting *Long double butt straps riveted*

Thickness of shell plates *1 1/2* diameter of rivet holes *1 3/16* 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 *64 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 bar 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 4 Tinders & 2 feed pumps, 1 feed pump rod, 1 Oil pump rod,*

*2 Eccentric rods with liners & bolts, 2 Eccentric shafts, 1 HP & 1 LP slide valve rod, 1 Oil pump rod, 1 Valve block, 4 studs & nuts for*

*propeller blades, 4 valves & seats for feed pumps, 4 do for barge pumps, 2 do for water*

*ballast donkey pump, 1 HP & 1 LP Cylinder Cover, 1 HP & 1 LP piston packing ring, 1 set of*

*bolts & nuts for air & oil pumps, 24 Boiler tubes, 12 Condenser tubes, a quantity of gaskets &*

*supplies for boiler tubes, 1 set of safety valve springs, Bolts & nuts & wire assorted for 1st & 2nd class*

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 6 11-53 recorded*

*D. 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

*+ 2 m 6*

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

*Greenock District.*

