

REPORT ON MACHINERY.

Port of *Glasgow*

WED. 20 SEP 1899

Received at London Office

No. in Survey held at
Reg. Book.*Glasgow*Date, first Survey *July 4th 1898* Last Survey *Sept. 12th 1899*(Number of Visits *42*)

on the

S.S. "Montezuma"

Tons

7345.27
*4734.35*Master *W. Owen*

Built at

Glasgow

By whom built

A. Stephen & Sons

When built

1899

Engines made at

Glasgow

By whom made

A. Stephen & Sons

when made

1899

Boilers made at

Glasgow

By whom made

A. Stephen & Sons

when made

1899

Registered Horse Power

Owners

Alfred Lewis Jones

Port belonging to

*Liverpool*Nom. Horse Power as per Section 28 *660*Is Electric Light fitted *yes*ENGINES, &c.—Description of Engines *Twin Triple expansion* No. of Cylinders *six* No. of Cranks *six*Diameter of Cylinders *22 1/2", 36", 61"* Length of Stroke *48"* Revolutions per minute *83* Diameter of Screw shaft *as per rule 11 1/2"* *as fitted 13 1/4"*Diameter of Tunnel shaft *as fitted 11 3/4"* Diameter of Crank shaft journals *12 1/2"* Diameter of Crank pin *12 1/2"* Size of Crank webs *16 1/2" x 8"*Diameter of screw *16'-0"* Pitch of screw *17'-9"* No. of blades *8* State whether moveable *yes* Total surface *72 sq ft*No. of Feed pumps *2 twin* Diameter of ditto *9"* Stroke *21"* Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2* Diameter of ditto *5 1/2"* Stroke *26"* Can one be overhauled while the other is at work *yes*No. of Donkey Engines *two* Sizes of Pumps *6 x 4 x 6 x 8 x 6 x 8* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *four 3 1/2 ton* In Holds, &c. *eleven 3 1/2 ton in each tunnel 2"*No. of bilge injections *two* sizes *7"* Connected to condenser, or to circulating pump *pump* Is a separate donkey suction fitted in Engine room & size *yes 3 1/2"*Are all the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessibleAre 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 & Tank suction* How are they protected *wood casing*Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *yes*Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes*When were stern tube, propeller, screw shaft, and all connections examined in dry dock *before launch* Is the screw shaft tunnel watertight *yes*Is it fitted with a watertight door *yes* worked from *top platform*

BOILERS, &c.—

(Letter for record *S*)Total Heating Surface of Boilers *9260*Is forced draft fitted *yes*No. and Description of Boilers *3 single ended return tube* Working Pressure *180* Tested by hydraulic pressure to *360*Date of test *27/6/99* Can each boiler be worked separately *yes* Area of fire grate in each boiler *75 sq ft* No. and Description of safety valves toeach boiler *one pair direct spring* Area of each valve *15.9* Pressure to which they are adjusted *180 lbs* Are they fittedwith easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *2'-0"* Mean diameter of boilers *15'-7"*Length *12'-0"* Material of shell plates *steel* Thickness *1 3/8"* Description of riveting: circum. seams *lap double* long. seams *butt triple*Diameter of rivet holes in long. seams *1 3/8"* Pitch of rivets *9 1/2"* Lap of plates on width of butt straps *19 3/8"*Per centages of strength of longitudinal joint *87.5%* Working pressure of shell by rules *205 lbs* Size of manhole in end *16" x 12"*Size of compensating ring *flanged* No. and Description of Furnaces in each boiler *4 Monson's* Material *steel* Outside diameter *43"*Length of plain part *top 17 1/2"* Thickness of plates *bottom 32"* Description of longitudinal joint *welded* No. of strengthening rings *13"*Working pressure of furnace by the rules *190 lbs* Combustion chamber plates: Material *steel* Thickness: Sides *7/8"* Back *7/8"* Top *7/8"* Bottom *7/8"*Pitch of stays to ditto: Sides *7 13/16" x 7 1/2"* Back *7 13/16" x 7 1/8"* Top *7 13/16" x 7 1/16"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *220 lbs*Material of stays *steel* Diameters at smallest part *1.78"* Area supported by each stay *62 sq"* Working pressure by rules *257 lbs* End plates in steam space:Material *steel* Thickness *1 3/8"* Pitch of stays *15 5/8" x 15 1/2"* How are stays secured *2 nuts* Working pressure by rules *337 lbs* Material of stays *steel*Diameter at smallest part *5.34"* Area supported by each stay *242 sq"* Working pressure by rules *220* Material of Front plates at bottom *steel*Thickness *13/16"* Material of Lower back plate *steel* Thickness *3/4"* Greatest pitch of stays *12 1/2" x 9 1/8"* Working pressure of plate by rules *432*Diameter of tubes *2 1/2"* Pitch of tubes *3 5/8" x 3 5/8"* Material of tube plates *steel* Thickness: Front *13/16"* Back *13/16"* Mean pitch of stays *8.15"*Pitch across wide water spaces *15 1/2" x 15 1/8"* Working pressures by rules *260 x 290 lbs* Girders to Chamber tops: Material *steel* Depth andthickness of girder at centre *8 x 7/8" double* Length as per rule *29 1/2"* Distance apart *7 13/16"* Number and pitch of Stays in each *3, 7 1/2"*Working pressure by rules *200 lbs* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked

separately

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

G-LS185-0131

17324 gls

DONKEY BOILER—

Description *None*

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 Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter the donkey boiler
Diameter of donkey boiler Length Material of shell plates Thickness
Description of riveting long. seams Diameter of rivet holes Whether punched or drilled Pitch of rivets
Lap of plating Per centage of strength of joint Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.
Dia. of stays. Diameter of furnace Top Bottom Length of furnace Thickness of furnace 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 uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— *As required by the rules & in addition, one propeller shaft & nut, either engine, two propeller blades, (one right & one left) one valve spindle, one beam jaw & spindle for centrifugal pump*

The foregoing is a correct description,

Wm. Stephen Ross. Manufacturer.

Dates of Survey while building During progress of work in shops - 1898. July 14, 12, Aug. 5, Sept. 5, 23, Oct. 3, 14, Nov. 1, 8, 23, 24, 28, 30, Dec. 6, 12, 19, 29, 1899.
During erection on board vessel - Jan. 11, 23, Feb. 16, 17, 28, Mar. 16, 23, 30, Apr. 13, 28, May 10, 23, 26, Jun. 6, 22, 27, Jul. 11, 14, 28, Aug. 3, 10, 28, 29, Sept. 6, 12.
Total No. of visits *42*.

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

+LMC 9-99

ENGINES—Length of stern bush *5 1/4"* Diameter of crank shaft journals *as per rule 16 6/8* as fitted *12 1/2* Diameter of thrust shaft under collars *12 1/2*

BOILERS—Range of tensile strength *29 1/2 32* Are they welded or flanged *no* DONKEY BOILERS—*None* Range of tensile strength ☒

Is the approved plan of main boiler forwarded herewith *Yes* Is the approved plan of donkey boiler forwarded herewith ☒

These engines & boilers have been constructed under special survey. The materials & workmanship are of good description they have been well fitted on board & tried under steam. This machinery is in my opinion eligible to have the above notification

It is submitted that this vessel is eligible for THE RECORD.

+L.M.C. 9,99 F.D. Blue Light

HL
21/9/99

The amount of Entry Fee... £ *3* : : : When applied for, *9/9/99*
Special ... £ *53* : : : :
Donkey Boiler Fee ... £ : : : When received, *12/9/99*
Travelling Expenses (if any) £ : : : *J.C.B.*

Committee's Minute

SEP 22 1899

Assigned

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



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