

REPORT ON MACHINERY.

Port of *Glasgow*

WED. 20 SEP 1899

Received at London Office

No. in Survey held at *Glasgow* Date, first Survey *July 4th 1898* Last Survey *Sept. 12th 1899*
Reg. Book.

(Number of Visits *42*)

on the *S.S. "Montezuma"*

Tons { Gross *7345.27*
Net *4794.35*

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 12 3/4*
as fitted 13 1/4

Diameter of Tunnel shaft *as per rule 11 1/4* Diameter of Crank shaft journals *12 1/2"* Diameter of Crank pin *12 1/2"* Size of Crank webs *16 1/2 x 8*
as fitted 11 3/4

Diameter of screw *16'-0"* Pitch of screw *17'-9"* No. of blades *3* 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 *6x4x6 7 8x6x8* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *four 3 1/2 ton* In Holds, &c. *seven 3 1/2 ton in each tunnel 2"*

No. of bilge injections *two* sizes *7"* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room of 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 accessible

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 & 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 to

each boiler *one pair direct spring* Area of each valve *15.9* Pressure to which they are adjusted *180 lbs* Are they fitted

with 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 5/8"* Lap of plates or width of butt straps *19 7/8"*

Per centages of strength of longitudinal joint rivets *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"* 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 *5/8"* Back *5/8"* Top *5/8"* Bottom *1/2"*

Pitch of stays to ditto: Sides *7 13/16 x 7 1/2* Back *7 13/16 x 7 5/8* Top *7 13/16 x 7 13/16* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *220 lbs*

Material of stays *Steel* Diameters at smallest part *1-7/8"* Area supported by each stay *62"* 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 *nuts* Working pressure by rules *337 lbs* Material of stays *Steel*

Diameter at smallest part *5.34* Area supported by each stay *242"* 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 5/8* Working pressure of plate by rules *432*

Diameter of tubes *2 1/2"* Pitch of tubes *3 3/8 x 3 5/8* Material of tube plates *Steel* Thickness: Front *13/16"* Back *13/16"* Mean pitch of stays *8.5"*

Pitch across wide water spaces *15 1/2 x 9 5/8* Working pressures by rules *260 x 290 lbs* Girders to Chamber tops: Material *Steel* Depth and

thickness of girder at centre *8 x 2 1/2* Length as per rule *29 1/2"* Distance apart *7 13/16"* Number and pitch of Stays in each *3, 7 13/16"*

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



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