

In compliance with the request made in the Secretary's letter of the 10th August, I have examined the drawings of the Machinery of this Vessel, and subjoin further particulars from these drawings. Viz.

The number of plates in the circumference of the Boilers are 4, welded joints; Circumferential joints lapped, double riveted, holes punched for 18" rivets \times 4 1/4" pitch.

The top of Combustion Chamber is supported by screws passing through 4 Bridge bearers, 1 1/4" dia. = 1.22 Sect. area 9" \times 10" pitch = 90" area. Bearer are 7 1/2" deep \times 3/4" thick.

Furnaces, plating, forming the Crown 9/16" (Bowling) bottom plates 9/16" (Staffordshire)

Cross Stays 2 1/4" dia = 3.976" Sect. area. 15" \times 15" mean pitch. (two rows) = 3963 lbs per inch

Tube plates 1 3/8" in front and 1 1/8" in back (Bowling) protected by 73 tubes in Centre Chamber 23 of which are stay tubes screwed and fitted with nuts & 71 in side chambers 20 of which are stays, 3 1/4" dia.

Steam Receivers or Superheaters off shaped at ends, plating 9/16" (Bowling) connected to Boiler by neck pipes 1 1/8" thick 1' 8" long \times 1' 4" dia. enclosed within Smokeboxes.

From the Sigs stated, and the arrangement and fitting of the Engines & Boilers of this Vessel, as seen by me and subsequently obtained from the Drawings, I am of opinion they are in safe working condition and good order.

James Hollison
Greenock Aug. 14th 1895



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Lloyd's Register
Foundation

IRON 462-0427

14959 Iron

S. S. Queen Margaret

The Boilers of this vessel were closed up previous to my first visit and am unable to Report fully on their construction. Subjoined are what particulars could be obtained from the outside.

Two, Oval, Horizontal, Boilers. 13' 6" wide x 15' 6" high x 17' 6" long. The ends at top are rounded to a radius of 4' 0". 3 Furnaces in each end fired fore and aft, with longitudinal Steam Receivers (or Superheaters) 17' 6" long x 4' 4" dia.

Working pressure 70 lbs

Shell plating $\frac{16}{16}$ ", Longitudinal joints are welded. Number in circumference, not ascertained, 5 widths in the length double riveted on edges. Manholes have rings fitted round them.

$$\text{Formula } \frac{51.520 \times 2 \times 40\% \text{ claimed by makers for welded joints}}{160" \times 6.5} = 69.3 \text{ lbs}$$

Combustion Chamber plating $\frac{9}{16}$ ". Screw Stays $1\frac{7}{16}$ " = 1.35" sec. area x $7" \times 8\frac{1}{2}"$ pitch = 59.5" area = 3085 lbs per inch.

$$\text{Formula for flat plates } \frac{100 \times 64}{60} = 106 \text{ lbs}$$

Furnaces 7' 0" long x 40" dia. plating $\frac{9}{16}$ "

$$\text{Formula for Stays } \frac{89,600 \times .25}{7' \times 40"} = 80 \text{ lbs}$$

Longitudinal Stays $2\frac{1}{4}"$ dia = 3.97" sec. area x 15" x 15" mean pitch = 225" area (one row) = 3967 lbs per inch

Cross Stays not seen

Direct Spring loaded Safety Valves are fitted. Manufactured by the Makers of the Boilers. 6" dia = 28.27" area, adjusted to blow at 70 lbs, highest accumulated pressure 75 lbs. fell to 67 lbs when Valves returned to seats. There are screw down easing Valves on Steam pipes.

James Morrison
Glasgow Aug. 4th 1875