

16286. Iron.
"S. S. Leeds"

No. Size and Description of Boilers *Run 24/11/75*

Two, Round, Horizontal, 10'8" dia. x 9'0" long, with two furnaces in each, fired from forward and Round Vertical Superheater
 Working pressure 70 lbs

Shell plating $\frac{1}{16}$ " (W. Clydesdale) 4 plates in the circumference and 3 widths in the length, circumferential joints lapped, double riveted, rivets 1" dia x $3\frac{3}{4}$ " pitch, longitudinal joints lapped, treble riveted rivets 1" dia x 4" pitch, End plating flanged & double riveted. Manholes have ^{upper} stays fitted round them. —

$$\text{Formulae } \frac{51520 \times 1.5 \times 75\%}{126.5 \times 6.5} = 76 \text{ lbs per inch}$$

Combustion Chamber plating $\frac{1}{16}$ " (Larnley) the top is supported by screws passing Bridge Bearers $1\frac{3}{8}$ " dia. $8\frac{1}{2}$ " x $8\frac{1}{2}$ " pitch. B. Bearers are 5" deep x $1\frac{1}{2}$ " thick (forged) Screw Stays $1\frac{3}{8}$ " dia = 1.48" sect. area $8\frac{1}{2}$ " x $8\frac{1}{2}$ " pitch = 72.25" area = 341 $\frac{1}{4}$ lbs per inch. —

$$\text{Formula for flat plates } \frac{100 \times 64}{72.25} = 88.5 \text{ lbs. —}$$

Furnaces 6'0" long x 3'4" dia plating $\frac{1}{16}$ " on Crowns (Larnley) and $\frac{1}{16}$ " on bottoms, butt joints fitted with double straps, and riveted to front plate which is flanged. —

$$\text{Formula for tubes } \frac{89600 \times .25}{6' \times 40} = 93.3 \text{ lbs. —}$$

Tube plates $\frac{1}{16}$ " protected by 70 tubes in each Chamber $3\frac{1}{4}$ " dia. 8 of which are Stays screwed & fitted with nuts.

Longitudinal Stays 2" dia. 15 " x $14\frac{1}{2}$ " pitch = 4848 lbs per inch

Direct Spring loaded Safety Valves are fitted $4\frac{1}{4}$ " dia. They commenced to blow at $67\frac{1}{2}$ lbs. accumulated pressure attained $69\frac{1}{2}$ lbs. —

Superheater 5'9" outside dia & 3'9" inside x 7'0" high, plating $\frac{1}{16}$ " End plating flanged, Shell is lap jointed. Single & double riveted rivets $\frac{1}{8}$ " ^{dia} x $2\frac{3}{8}$ " pitch

James Morrison
 Glasgow Nov. 16th 1876