

Steel main Boilers for Knags Furnace, Witley & boy. $\frac{3}{4}$ N^o 249.
 Furnace, Westgarth & boy. N^o 140.
Working press = 180 lbs.

Plate	$\frac{9.5 - 1.375}{9.5} \times 100 = 85.5 \%$	
Rivets.	$\frac{5 \times 1.48 \times 1.75 \times 95}{9.5 \times 1.3125} = 88.2 \%$	
Shell.	$\frac{22.5 \times 85.5 (21-2)}{144} = 210.0$	lbs.
Furnace.	$\frac{1259 (9-2)}{45.75} = 192.6$	lbs.
Ends. Top.	$\frac{185 \times 14^2}{15.75^2 + 14.62^2} = 231.4$	lbs.
" " Stays.	$\frac{5.05 \times 10000}{15.75 \times 14.62} = 219.3$	lbs.
Flue plate.	$\frac{150 \times 15.5^2}{13.5^2} = 194.4$	lbs.
B. " "	$\frac{140 \times 12^2}{7.5^2} = 358.4$	lbs.
Stay tubes in shell.	$\frac{1.85 \times 7500}{7.5^2 - (4.9 \times 4)} = 348.6$	lbs.
" " marginal two.	$\frac{1.92 \times 7500}{(10.5 \times 7.5) - (4.9 \times 2)} = 208.6$	lbs.
b.b. brace.	$\frac{135 \times 9.5^2}{7.87^2} = 196.5$	lbs.
" " " Stays.	$\frac{1.5 \times 8000}{7.87^2} = 193.5$	lbs.
Girders.	$\frac{9900 \times 9^2 \times 1.5}{(30 - 7.87) \times 7.87 \times 20} = 232.0$	lbs.
Boiler brace.	$\frac{135 \times 15^2}{14.56^2 + 7.87^2} = 221.4$	lbs.
Wrist. C.C.	$\frac{2.09 \times 9000}{11.218 \times 7.87} = 213.0$	lbs.
" " Stays.	$\frac{2.42 \times 9000}{11.218 \times 9.93} = 195.5$	lbs.
Top row screw.		
Stays. <u>Corner</u>		



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