

Main Boilers for Mep's Furnace Withy & Coy No 245. + 4.

Furnace height 146. + 153

Working press = 180 lbs.

Plate.	$\frac{8 - 1.1845}{8} \times 100 = 85.15\%$	
Rivets.	$\frac{1.11 \times 5 \times 85 \times 1.45}{8 \times 1.156}$	= 89.2%
Shell	$\frac{21 \times 85.15 (18.5 - 2)}{162}$	= 182.1 lbs
Furnace.	$\frac{12.59 \times (9.5 - 2)}{52}$	= 181.5 lbs
Ends top	$\frac{185 \times 16^2}{14.5^2 + 13^2}$	= 199.3 lbs
" " Stays	$\frac{10000 \times 4.9}{14.5 \times 13.}$	= 215.3 lbs
Tube plate	$\frac{140 \times (13 + \frac{10}{2})^2}{14.5^2}$	= 215.7 lbs.
B " "	$\frac{140 \times 12^2}{9.5^2}$	= 223.3 lbs
b. b. back.	$\frac{135 \times 10^2}{8.5^2}$	= 186.8 lbs.
" " " Stays.	$\frac{4500 \times 2.04}{8.5^2}$	= 214.8 lbs
" " Sides	$\frac{135 \times 9^2}{8^2 + 7.5^2}$	= 181.8 lbs
" " " Stays	$\frac{4500 \times 2.04}{8 \times 4.5}$	= 258.4 lbs
Girders	$\frac{9900 \times 8^2 \times 1.5}{(24 - 8) \times 8.5 \times 24}$	= 244.9 lbs
Boiler back between C.C.	$\frac{135 \times (12 + \frac{10}{2})^2}{13^2 + 8.5^2}$	= 323.5 lbs.
" " Stays	$\frac{9000 \times 2.04}{10.75 \times 8.5}$	= 204. lbs.



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