



Something bad happens every time that a burner turns off,

1. The pressure or temperature of the boiler drops, especially when it turns on again and all of that cold air takes heat from the system.
2. The hot refractory in the boiler cools while off and during pre-purge and then heats when the burner again comes on. The contraction and expansion causes wear and tear on the refractory that wouldn't take place with a burner that can track to the load.
3. There is a terrific waste of energy. Air is induced through the burner while off from the hot stack - a waste. Air is forced through the boiler, heated to near the boiler temperature and then exhausted - a big waste.
4. The burner's ignition system must go through another cycle. Starters fire off the motor starts, the ignition transformer comes on, the ignition electrodes come on, the pilot valves come on, and the main fuel valves cycle on. Every component is subjected to a cycle. That is translated to wear and tear that does not occur while the burner is on. The number of service calls is proportional to the number of burner starts.

We recently retrofitted a blue burner with a **-weishaupt-**. The process boiler used to cycle on for about a minute, shut off for a minute, etc. The steam pressure varied from about 70 psi just before light off to 120 psi when it shut down. Now, with a **-weishaupt-** the burner just stays on. Period. The steam pressure varies by a very small amount even though there are rapid swings in load.

In a local school district there were new boilers purchased for heating. One school has boilers with **-weishaupt-** burners and the other school has boilers with standard burners. The operating time for both systems includes the entire winter season and the transition times in the fall and spring.

The Weishaupt burners cycled a total of two hundred thirty-four (234) times in their first winter of operation. During that same heating season, the standard burners cycled four thousand, five hundred eighty times (4,580).

For every Weishaupt burner start, there were about 20 by the standard burner.

That is 20 times the wear and tear, 20 times the purge losses. Couple that with the number of times that temperature control elements had to re-adjust themselves because of the varying water temperature. In both the long and short term **-weishaupt-** burners will result in customer savings.