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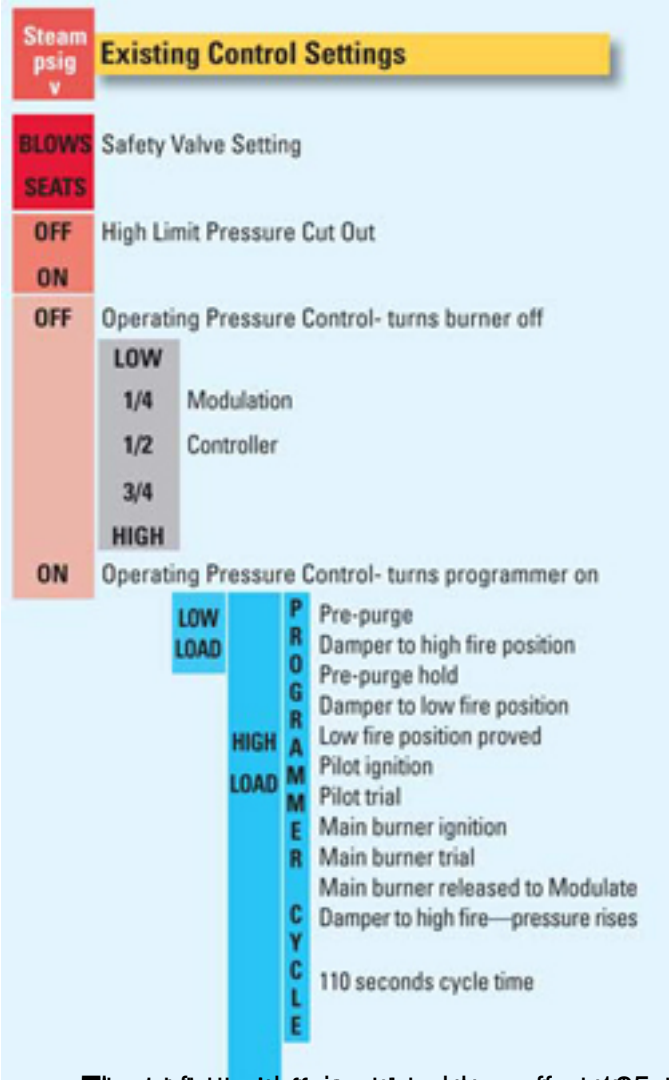
Want to get the most out of your fired equipment? Consider these suggestions for improved control settings.

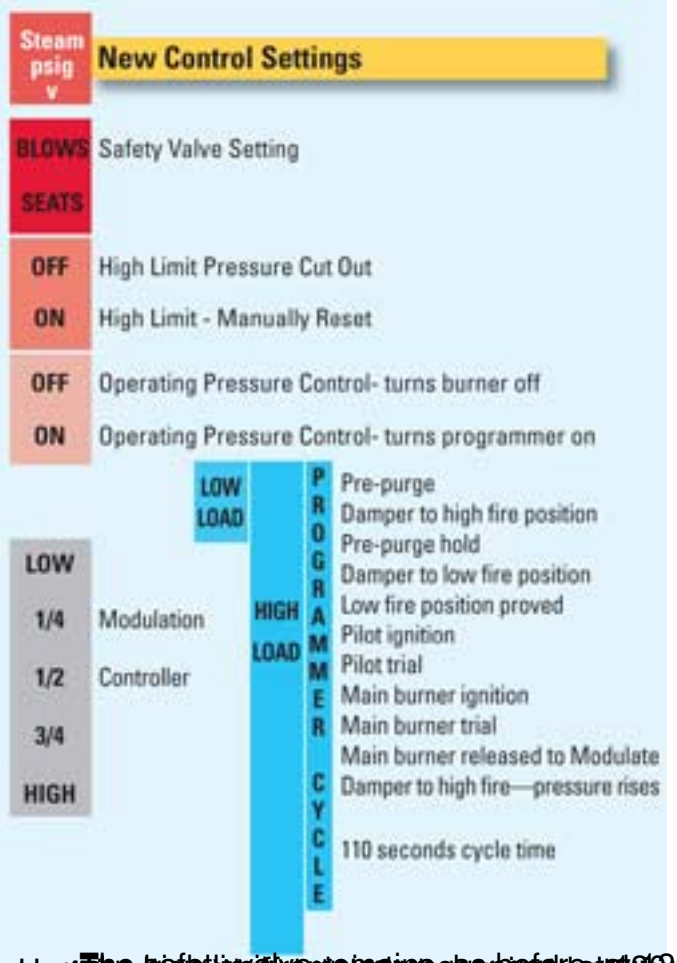
So your budget is tight and you're pressured to make some energy savings somewhere? Why don't you try some control adjustments? "Like that will make any major change," you say. That depends on how your boilers and processes are set up right now. Usually, as long as the boilers work, who really cares? This is precisely why your controls deserve a closer look!

Achieving the highest efficiency possible

Experts in the energy-conservation field typically say that the highest efficiency you can hope to achieve will come as a result of the boiler continuously producing what the load demands—and changing only slightly with each slight change in the load. This requires flame modulation. Most medium- to large-size boilers will have modulation control, in addition to on/off controls. Take a few moments to learn where your boiler turns on and off and where your modulation controls operate—and jot this information down.

Most boiler installations are set up to operate as follows…


Steam psig v
Existing Control Settings
BLOWS SEATS
Safety Valve Setting
OFF
ON
High Limit Pressure Cut Out
OFF
Operating Pressure Control- turns burner off
LOW
1/4
1/2
3/4
HIGH
Modulation
Controller
ON
Operating Pressure Control- turns programmer on
LOW LOAD
HIGH LOAD
PROGRAMMER CYCLE
Pre-purge
Damper to high fire position
Pre-purge hold
Damper to low fire position
Low fire position proved
Pilot ignition
Pilot trial
Main burner ignition
Main burner trial
Main burner released to Modulate
Damper to high fire—pressure rises
110 seconds cycle time



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