

Near Miss Safety Notice

Safety Bulletin: #1018

Date: 01/10/05

Topic/Issue: Pilot Stability Evaluation

Applicability: All Boiler Operations

What Happened:

A boiler was damaged and out of service for more than two weeks due to a delayed main flame ignition. This situation is believed to have occurred due to an unstable pilot. This instability is believed to have been caused by the pilot's incorrect adjustment and setting at start-up along with steam leaking into the burner from a Low NO_x steam injection system.

Immediate Actions to Take:

Conduct a pilot stability evaluation by locking the boiler into the pilot test mode and observing the pilot only over some time period (possibly two to three minutes). This can be done with most burner management systems using the *test mode* button. Observe the pilot and make sure that the flame signal is stable over this period. Conduct a visual observation of the pilot also after it is lit off in this mode again to check for the pilot's shape and stability. It should be full, burning blue, and close to the pilot tip.

If the pilot is found to not be stable take action with an experienced professional knowledgeable in setting up burners to correct the condition. Corrective actions may include repositioning the pilot igniter, changing out pilot orifices, changing out the pilot assembly, and or changing the pilot gas pressure.

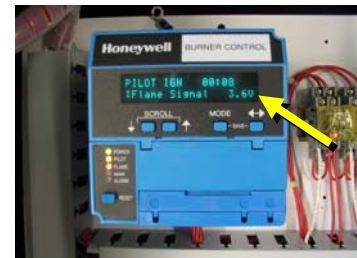
If steam injection exists, make sure that it also is not leaking through when the boiler is off. Look into the firebox with just the steam on, (not the blower), and verify that no leakage is taking place. If steam is leaking through repair any leaking valves before attempting another light off.



Typical BMS



Test Button



Flame Signal