

Eddy's Boiler House News

TIP OF THE MONTH FOR THE MAINTENANCE DEPARTMENT

by Eddy Emerson

Improve Boiler and Boiler Room Efficiency

Reduction of Fuel Firing Rate

Cost: Low to Moderate Savings:

Description: Conditions change, many burners have been found to be grossly oversized for their applications. Successful energy conservation actions, changes in load requirements and other factors may be producing far less demand for heat. If fuel firing rate can be reduced, then stack losses will decrease along with standby losses.

Advantages/Disadvantages: The cost of installing new burners and the cost of engineering and other fees for redesign of an existing system may not be justified. A study of the economics of the issue will show if it will pay. It makes no sense to drive a lot of heat into a boiler with high exhaust gas temperatures and then let it sit idle for long periods; this is wasteful. A longer firing time with lower losses makes more sense.

Often burner firing rates can be reduced but at low firing rates when the exhaust gas temperature is depressed below the acid dew point this may cause damage to the boiler, breechings and stack. Burners are designed to operate within a specific range. The manufacturer designed the burner with both a maximum and minimum firing rate. Reducing the firing rate below minimum firing rate can have an adverse effect on the efficiency rating of the burner.

Emerson Boiler, Inc.
aka: Boiler Consulting & Training, Inc.
6081 N. 57th Dr.
Glendale, AZ 85301
623-847-4788
623-847-2386 Fax

bctraining@earthlink.net
Arizona License L-04 #ROC171918 Bonded – Insured www.boilersmadesimple.com