

# *Eddy's Boilerhouse News*

## TIP OF THE MONTH FOR THE MAINTENANCE DEPARTMENT

By Eddy Emerson

### ***Improve Boiler and Boiler Room Efficiency***

## **The next generation of combustion controls is here.**

As we look at making these boiler rooms more efficient we are finally getting some real help. Honeywell and Fireye have both come out with their Fuel to Air Ratio Controllers. These controllers are designed to give precise control of the fuel to air ratio making the modulating burner much more efficient.

We have always had to allow for linkage wear and slop when adjusting our burners. We did this by calibrating the burners with some tolerance and this cost in efficient. These new systems do away with the linkage and place actuators directly on the air damper and fuel control valves. If you are dealing with Flue Gas Re-circulation on a low NOx burner these control systems also provide for an actuator to control FGR.

Once the actuators are set-up they will maintain an exact curve for precise air to fuel control. It should be mentioned that these systems can handle dual fuel and FGR.

They even provide for a start point that can be different than the low fire position which is also a great advantage when setting up a burner. As you can see the fat boy is sold on these new control systems but don't forget he wanted a Ford Edsel too. So what will the Honeywell R7999 Fuel Air Ratio Controller and the Fireye Nexus system do for you? Well, if we can increase combustion efficiency of a burner 5% say from 79% to 84% we will save \$6.30 for every \$100.00 spent on fuel and these systems will often do better than that. The price of fuel is going up but so will the savings. Help is here but, it is not cheap!!!

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