

Monday, December 11, 2023

Condensing Boiler Specification - Part 8 – Mobile Computer Monitoring

Monday Morning Minutes | by R. L. Deppmann

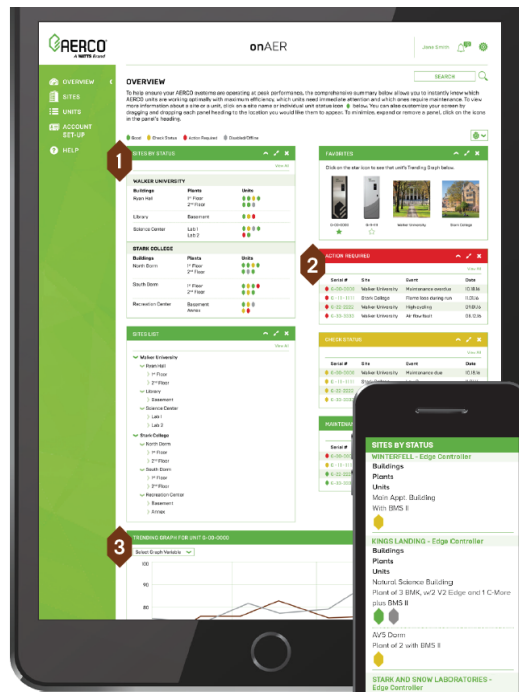


Photo Credit: Aerco

In the real world of today, there is little chance of having an employee available to check all the equipment in the boiler room on a daily or even weekly basis. Your client would share praises if you specified a way they could understand the status of the boilers, learn if some parameter was deviating from the norm, and alert them of an impending component failure. All of this before the nuisance shutdown occurs.

What Does Your School District, University, or Multi Building Commercial Client Need?

The last thing a multi-building owner such as a school district facilities director wants is a shutdown due to a heating problem. I shudder when I hear the early morning news and the words, “XYZ middle school is closed today due to a heating problem”. In Michigan and Ohio, it means a director I may know well had to make the tough call.

The entire district has a physical plant staff that is stretched to, and often beyond, their limits. What if someone at the school district headquarters could monitor all the school’s boilers operating status. That same system might even check component operation in the boilers and alert them to a trend which will result in failure. The system may even tell you what component the culprit is.

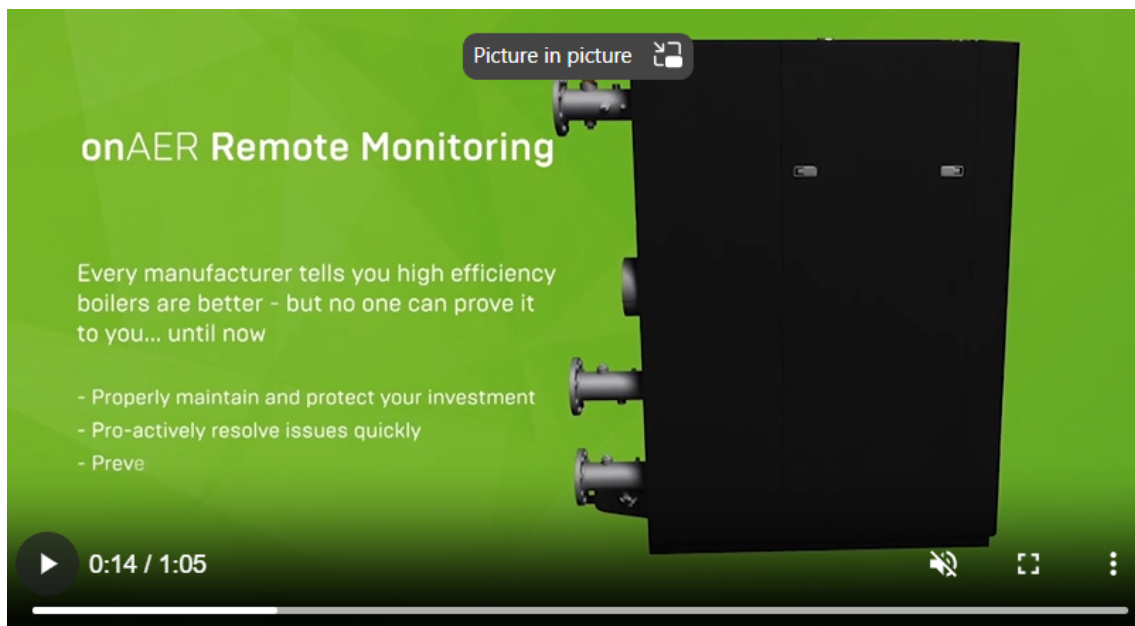


Photo Credit: Aerco

A Great Boiler Controller Can Offer More

There are a few things that make for a good condensing boiler controller:

1. A good condensing boiler controller can stage the boilers on and off to allow operation at the highest efficiencies and least operating costs. [Condensing Boiler Specification: Operation at Lower Loads.](#)
2. A good condensing boiler controller can operate the two way on-off boiler valves in a primary variable system [Condensing Boiler Specification: Variable Primary Thoughts](#) and operate the variable speed primary pumps in the primary-secondary system [Condensing Boilers: Variable Primary-Variable Secondary Example.](#)
3. A good condensing boiler controller can provide temperature reset. But, a **great** condensing boiler controller can make the adjustment or tweaking very easy for the owner's personnel to understand. [Condensing Boiler Specification - Part 2 -Boiler Temperature Reset Made Simple?](#)

What else makes a **great** condensing boiler controller? What about a controller that will contact you when it needs attention or will need attention?

Mobile and Computer Reporting and Alerts

A great condensing boiler controller such as the Aerco Edge® Controller with onAER® monitoring offers these benefits for your client. The controller will give you the system status which shows what is operating and how.

The photo at the start of this blog shows an overall status of systems by buildings. If the physical plant department sees something, they can dig down to the building level and even down to the boiler level.

TECHNICAL DATA

Technical data for **Unit # G-10-5272** at Walker University is listed below. To add this unit's Trending Graph to the "Add to Favorites" button at the right. To add a new start-up form, disable faults, enable shut downs, or record maintenance performed, click on the green links below.

Site:	Walker University	Model:	Benchmark 2000	Add New Start-up Form
Building:	Ryan Hall	Sales Order:	13080750-1	Disable Faults for 24 Hours
Plant:	First Floor	Ship Date:	2013-08-27	Maintenance/Service Performed
Unit Serial #:	G-10-5272	Local Rep:	GA Fleet	Extended Period Shutdown

STATUS OVERVIEW

Unit status:	Auto	Faults Enabled/Disabled:	Disabled for xx hours/days
Age of last heartbeat record:	18263:46:45	Extended period shutdown:	Enabled
Total run cycles:	532091		

Event: Flame Loss During Run	
Possible Cause	Suggested Action
1. Faulty Water temperature switch.	1. Test the temperature switch to insure it trips the actual water temperature.
2. Incorrect PID settings.	2. Check PID settings against Menu Default settings in the Appendix. If the current readings then reset them to the default values.
3. Faulty	

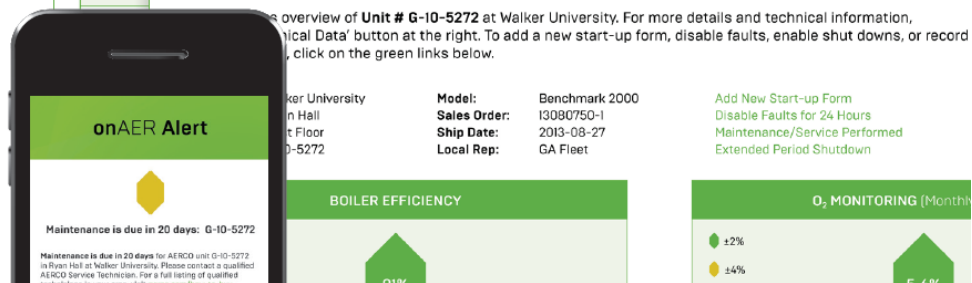


Photo Credit: Aerco

The system will allow the user to drill down if there is an issue. The system will suggest possible causes and, in many cases, offer a representation of the boiler showing the part. The physical plant HQ can deploy its own forces or call a contractor or even push a button for the manufacturer to send someone.

The mobile app can alert the proper staff, as determined by the owner when a shutdown is imminent.

As the consultant to the owner, the engineer should look at this important option and consider adding this option to the specification.

Part 1: Condensing Boiler Specification – Part 1 – Design Efficiency

Part 2: [Condensing Boiler Specification – Part 2 – Boiler Temperature Reset Made Simple?](#)

Part 3: [Condensing Boiler Specification – Part 3 – Operation at Lower Loads](#)

Part 4: [Condensing Boiler Specification – Part 4 – Variable Primary Thoughts](#)

Part 5: [Condensing Boiler Specification – Part 5 – Primary-Secondary Thoughts](#)

Part 6: [Condensing Boiler Specification – Part 6 – Variable Primary - Variable Secondary Example](#)

Part 7: [Condensing Boiler Specification – Part 7 – Variable Primary - O2 Trim Saves Your Client Money](#)