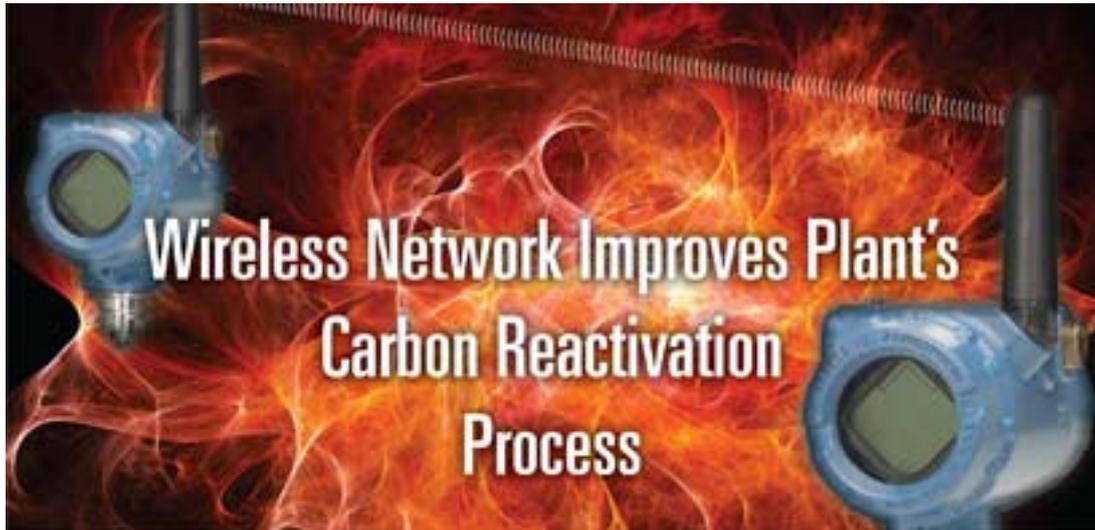


## Solution Spotlight

Written by MT Staff  
Tuesday, 12 January 2010 11:24

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**Harsh operating conditions? Complex application? No worries!  
Temperature transmitters on a critical rotating kiln are now delivering continuous information that enables better heat control all the way around.**

Emerson Process Management's Smart Wireless network using the WirelessHARTT communications standard is contributing to welcome process improvements at the Calgon Carbon Corporation facility in Blue Lake, CA. The site is one of several Calgon plants where carbon is prepared for reuse by removing chemicals it has picked up in previous filtering of air, gases, water and other liquids. Despite harsh operating conditions, the Smart Wireless network at Blue Lake is able to provide continuous—*and valuable*—temperature measurements from a rotating catalyst kiln where spent carbon particles are reactivated.

There are a number of steps in the reactivation process. They involve passing recycled carbon through the kiln where it is dried and chemicals that it has absorbed are "cooked off"—*at temperatures ranging between 1400 F and 1800 F*. Measuring the temperature at each zone in the kiln is important to ensure proper heat transfer for each step in the process. For this reason, six RosemountR wireless temperature transmitters were recently installed to monitor temperatures in the kiln and transmit a steady stream of data, giving operators more information for controlling heat levels in each zone.

The effects of process changes on heat transfer are now readily apparent, and trending can be used to improve process efficiency. This was not possible previously with the limited amount of information generated every two hours through manual viewing of readouts on devices

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connected to thermocouples in the kiln.

According to Blue Lake site manager Jeremy Dolan, "We used WirelessHART because of the ease of installing the network, the reduced cost of installation and the ability to communicate in spite of the constant rotation of the kiln. Non-wireless methods were too expensive, and other wireless line-of-sight systems could not handle the kiln's movement."

### **Emerson Process Management Chanhassen, MN**

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