

W. H. Cooke Times

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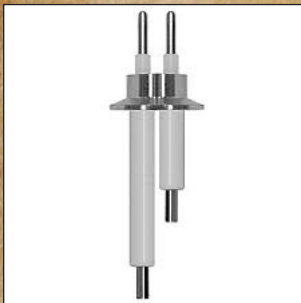


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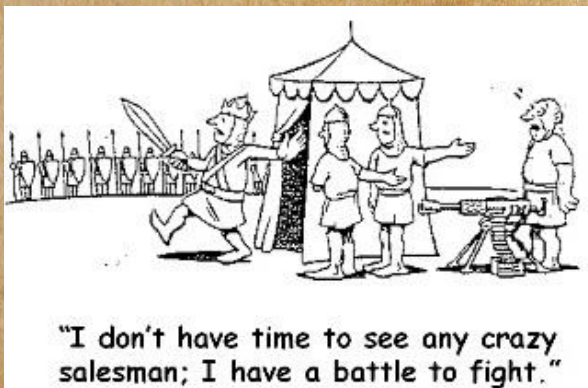
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W.H. Cooke & Co.
2016 Sponsor of the Codorus Blast Nature Tent



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Quarter in Review

The 2nd quarter of 2016 saw modest growth for us over the same period last year and we feel fortunate that we can say that considering the feedback we have gotten from some of the people we have talked to in the industrial sales sector. Our customers come from a variety of industries and over the next few newsletters, I will highlight some of the industries we serve and some of the products that we offer to those industries. This quarter I will be discussing Bakeries and Plastics manufacturers.

For 25 plus years we have manufactured temperature / humidity “proofer” control systems for bakeries stretching from Anchorage Alaska to West Palm Beach Florida and everywhere between. Some have even made it to France and Russia (they like hamburgers too). The temperature and humidity in a proof box is critical to ensuring that the dough rises properly prior to baking. These systems are used in large commercial bakeries producing thousands of dozens of rolls and bread an hour and are not suited to the corner bakery store. Details on the control system can be seen at <http://www.whcooke.com/files/PCS-3000-Brochure.pdf>

Those same bakeries use our dough temperature monitoring system. Controlling the temperature of dough is another critical part of the bread making process. Pocket thermometers have been known to be gobbled up by rising dough only to surface in the dough divider where things go “crunch”. The divider has to be shut down and repaired not to mention a batch of dough discarded – an expensive proposition. Our dough temp system uses a thermocouple that is tethered to the control box so it can’t be “lost” or sucked into a dough pump. That could be why we have sold over 500 of these temperature monitors in the past 10 years. Visit http://www.whcooke.com/files/rts-800_manual.pdf to learn more.

Visit <http://www.whcooke.com/downloads/2014-Bakery-Catalog.pdf> to see other products for bakeries.

Plastics is an industry that we serve, supplying thermocouples and heating elements. One unique item we offer to the industry is a split “sheath” cartridge heater manufactured by Dalton Electric.



[Click image for brochure](#)

Longer cartridges typically have several heated coils or “zones” within the cartridge tied in parallel. So one zone may burn out while the rest continue to work resulting in uneven heating and rejected extruded or injection molded parts. The split sheath design offers one continuous coil eliminating multiple zones and the issues mentioned above. In addition, the Dalton heater runs cooler, heats more evenly and efficiently and lasts longer – lowering operating costs and ultimately cost per heater. However, the best attribute is its’ non seizure feature. Because the heater is split down the middle and expands to provide excellent contact inside the bore, it also contracts to its original diameter and will not seize in the bore. If you have ever had to drill a cartridge heater out of a bore in a mold you know it can be a very unpleasant and difficult task with risk of damaging an expensive mold.

A short video can be seen here:

http://www.whcooke.com/files/Dalton_Watt-Flex_Cartridge_Heater.mp4.

Watt-Flex Cartridge Heaters

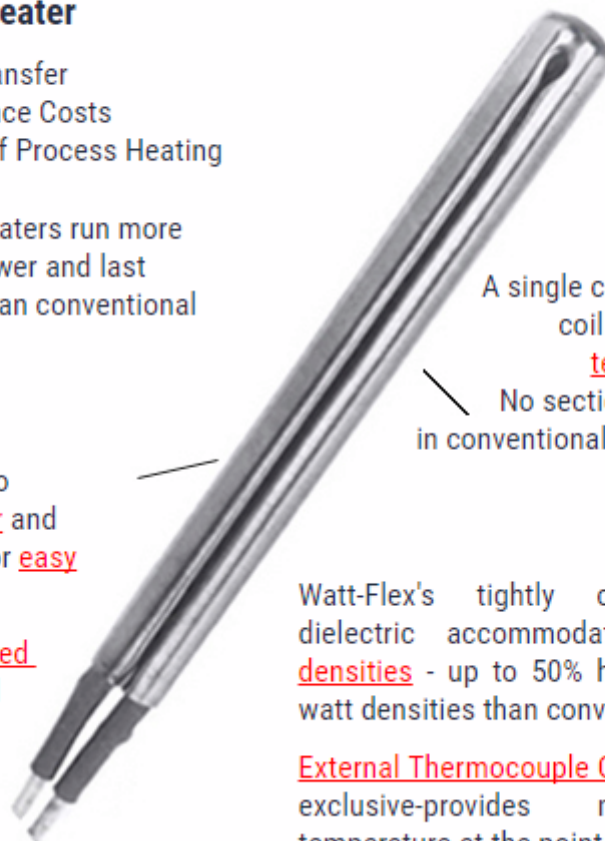
The Revolutionary Watt-Flex® Split-Sheath Cartridge Heater

- Maximizes Heat Transfer
- Reduces Maintenance Costs
- Reduces the Cost of Process Heating

Watt-Flex Cartridge Heaters run more efficiently, use less power and last up to 5 times longer than conventional cartridge heaters.

Split-sheath expands to maximize heat transfer and contracts when cold for easy removal from bore.

Ideal for use in oversized bores. Eliminates need for tight fits, tight tolerance bores.



Hot Tip or
Cool Tip Option

A single continuous heating coil ensures a uniform temperature profile.
No sections to burn out as in conventional cartridge heaters.

Watt-Flex's tightly compacted MgO dielectric accommodates higher watt densities - up to 50% higher warrantable watt densities than conventional heaters.

External Thermocouple Option - a Watt-Flex exclusive-provides more accurate temperature at the point of heat transfer to

Best regards,
Wayne Cooke Sr.

Custom Application: 12 Channel NEMA 4 Temperature Recorder

The Maintenance Mgr. of a steel plant in the Midwest called with an application for a portable recorder that can measure, record, save and print temperatures of 12 zones in a high temperature oven. We knew we could do it because we recently put together a similar portable recorder for an asphalt plant here in Pennsylvania. That customer wanted a recorder with both type K and type J thermocouple inputs with a strip jack panel for quick disconnect in the field. They use it to provide asphalt production temperature documentation to the state of Pennsylvania when doing a state funded project.

Manufactured for a Steel Plant



Manufactured for an Asphalt Plant



One of the challenges was to find a suitable enclosure to house the recorder. Recorders are typically long and narrow. A recorder 6" x 6" x 10" long would require a very large enclosure due to the 10" depth. Deeper panels generally have a large front panel. Fortunately, we have access to a custom panel manufacturer that supplies us with handmade fiberglass and metal enclosures fabricated to fit the instrument perfectly – and no larger. We even specify front and back hinged doors which facilitates access to the chart and pen up front as well as downloading data to a memory stick. The customer can also easily access wiring through the back door. And of course a nice ergonomic handle for toting it around.

It turned out beautifully. Another satisfied customer. Have a look for yourself - http://www.whcooke.com/files/IMG_7687.mp4.

If you have a data logging/recording application, we would love to discuss what we might be able to do for you. Thanks and have a great day!

Wayne Cooke Jr.

Tech Tips

How to check the polarity of a thermocouple:

Part 2 of a 2 part series with Wayne Cooke Sr.

C. Check for proper polarity. Many thermocouples are terminated with connectors or a transition where it is possible to have a reverse connection. That is, the negative wire is connected to the positive pin of the connector and positive wire is connected to the negative pin. When heat is applied to the thermocouple with the sensor plugged into a temperature tester, the reading will go down as the temperature goes up.

Note: It is not unusual to also see what is known as a “double reverse” connection. Here is an example. Customer has a type K thermocouple terminated with a screw cover

head on top of a hot furnace. The electrician connects the wire in the head in reverse. Negative to positive and vice versa. He walks back to the controller 50 ft away and observes that the temperature is reading in the negative direction. Obviously he has a reverse connection. Instead of getting the ladder back out and climbing up on top of the hot furnace, he reverses the connection at the terminals of the controller and sure enough the controller reads in the positive direction. Problem solved? No. He must go back and correct the wiring because he still has the chromel wire connected to the alumel and vice versa in the run of wire from on top of the furnace (where the ambient temp in the screw cover head might be 150 F) and the terminals on back of the controller (where the ambient temp might be 70 F). The result is the same as it would be if he used uncompensated copper wire between the 2 connections and the reading will be off by 80 F ($150 - 70 = 80$). Remember red is always negative when working with a thermocouple and usually positive in a standard electrical connection so it easy to get that mixed up.



For a quote on any Fluke products please give us a call or email sales@whcooke.com

D. If you want to determine if your thermocouple or the instrument it is connected to is bad, try the following. Disconnect the thermocouple from the temperature controller or PLC input module and short across the 2 input terminals at the controller. If the controller reads ambient at the terminals, the thermocouple is most likely the problem. This is not always true for all controllers as I've seen a few where you must connect a thermocouple to the instrument terminals so it is best to take a short piece of thermocouple wire, strip both ends and twist securely at one end to form a junction and connect the other end to the input terminals and see if you read ambient temperature.

We hope that you have enjoyed this 2 part tech series on thermocouples. Stay tuned for more tech tips in future issues. Thanks! Wayne Cooke Sr.

Lumenite Level Controls for Industrial and Sanitary Applications



Liquid Level Probes



Milk Pasteurization Testing System

W. H. Cooke & Co. is a stocking distributor for Lumenite Control Technology who manufactures industrial and sanitary level sensors and controls. Lumenite offers continuous and point level controls as well as specialty products such as their Milk Pasteurization Testing System.

Lumenite® conductivity level controls work by measuring the resistivity of a liquid. Resistance is a property that quantifies how strongly a given material opposes the flow of electric current. For example, hydrocarbons (crude oil, ethane, octane, etc.) have a resistivity around 20 Megohms and are non-conductive. Milk, whey and eggs on the other end have a resistivity between 200-1000 Ohms making them very conductive.



RF Capacitance Level Controls



Panel-leveline Conductivity Level Controls



Milk Pasteurization Test Kits



Probe & Jack Assemblies



Industrial-leveline Conductivity Level Controls

Custom Sensor



We have no idea how this 100 ohm platinum RTD sensor is used but it illustrates that we make many unique and unusual sensors to customers specifications. Many times we will discuss the application in detail and together with the customers' input come up with a suitable design. The more we know about the application and what you are trying to achieve the better chance we have of coming up with the perfect fit.

In this case I believe the customer knew just what they wanted and described it to us. It's a 3 wire 100 ohm platinum RTD in a .125" OD stainless steel tube with a 90 degree bend at the appropriate place for their use. It's terminated with a flat pin mini plug and we made a mating 3 wire RTD Teflon wire extension cable to mate up with the sensor.

If you have a special application for a temperature sensor we will be happy to discuss it. Or go to our "Custom Solutions" page on our web site and send us the info.

See <http://www.whcooke.com/customsolutions.php>

New From Precision Digital

Precision Digital has just come out with a large 1.8" LED digital display that can be seen from 100 feet away. It is a great option for use with scales or any application where visibility from a distance is a plus. For more information on Precision Digital Products please see here http://www.whcooke.com/manufacture_stage.php?compid=predig



HELIOS DUAL-LINE LARGE DISPLAY

- ▶ READABLE FROM UP TO 100 FEET (30 METERS) AWAY
- ▶ SUPERLUMINOUS SUNLIGHT READABLE DISPLAY
- ▶ LARGE 1.80" DIGITS
- ▶ DUAL-LINE DISPLAY
- ▶ SIX FULL DIGITS ON EACH LINE

HELIOS

UL LISTED CE

The only large display meter with a dual-line display so bright it can be read in direct sunlight.

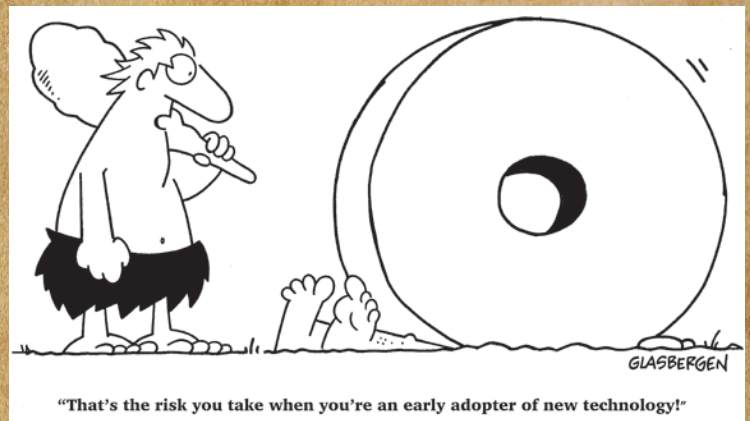
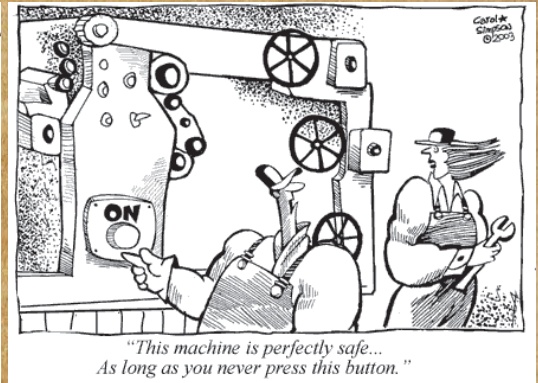
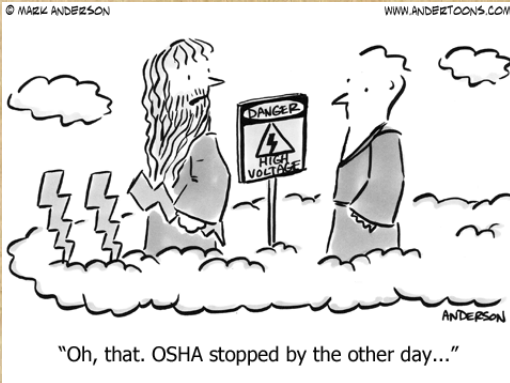
www.predig.com

PRECISION DIGITAL

For the rest of this brochure, see here
http://www.whcooke.com/files/predig_helios_brochure.pdf

Funnies

We think the below comics and jokes should be “safe” for the whole family



Top 13 Safety One Liners

1. All rumors are true. Especially if your boss denies them.
2. When an employment application asks who is to be notified in case of emergency, I always write, "A very good doctor."
3. Murphy's Law At work. Office equipment that has broken down will work perfectly once the repairman arrives.
4. Do it tomorrow. You have made enough mistakes for today.
5. If you do a job too well, you will get stuck with it.
6. How do I set my laser printer on stun?
7. Don't be irreplaceable; if you cannot be replaced, you cannot be promoted.
8. Q: How do you drive an engineer completely insane?
A: Tie him to a chair, stand in front of him, and fold up a drawing the wrong way.
9. Work. It isn't just for sleep anymore.
10. You have the capacity to learn from your mistakes and you will learn a lot today.
11. A clean desk is a sign of a cluttered desk drawer.
12. Meetings are a practical alternative to work.
13. The reward for a job well done is more work.

In the Community



The 2016 Codorus Blast was a success and once again W. H. Cooke & Co. was the sponsor of the Nature Tent. For more information on the Codorus Blast, please visit the following links.

<http://friendsofcodorus.org/>

<http://codorusblast.org/>

Yes, its alive!



Family time



Kids & magic go together



Man, that's a big eagle!



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