

# Multitasking electrician at chemical processor gains efficiency with versatile tools

## Professional Review

**Name:** Mike Schlegel,  
Maintenance Technician

**Company:** Cabot Microelectronics Corporation

**Tools:** Fluke 725 Process Calibrator, 381 Remote Display True RMS AC/DC Clamp Meter, Fluke 87 Digital Multimeter

**Key Benefits:** Calibration time dropped by 75 % with the Fluke 725 Process Calibrator

### Background

Cabot Microelectronics is the world's leading supplier of slurries and a growing provider of polishing pads used in the semiconductor production process. We talked to Cabot Microelectronics (CMC) maintenance technician Michael Schlegel about some of the challenges he faces on a daily basis.

### Review

I work at our manufacturing plant in Aurora, Illinois and am usually called on to analyze electrical problems. A portion of my job is troubleshooting those problems. The balance of my time is spent on preventive and predictive maintenance or capital projects.

I may move from electrical to mechanical to pneumatics to plumbing activities. I use a lot of Fluke tools in the process, including the 725 Process Calibrator, the 381 Remote Display Clamp Meter, and the Fluke 87 Digital Multimeter, which I carry with me most of the time.

### More efficient calibration

We calibrate most of our pressure and temperature transmitters in house, so I use the 725 a lot. The 725 tells me everything about the process, and it covers RTDs, thermocouples, and process loops.

I introduced the 725 to CMC because it's more adaptable to our business needs than what was being used. The previous calibrator had a lot of modules that would drift and had to be constantly calibrated. The Fluke 725 is much more efficient and easier to use. Overall, in our experience, calibration time dropped by 75 % with the Fluke 725.

### Remote display flexibility

Minimizing downtime is critical for any business. We had a situation where the Fluke 381 amp meter helped us find a persistent intermittent problem with one of our machines. The MCB [Main Circuit Breaker] kept tripping out every few hours. We would shut it down and take some ohm readings with the Fluke 87 but nothing showed up. So we reset the machine and it would later trip again.

Thinking that inrush current was probably the problem, we attached the 381 clamp meter to the MCB, closed the cabinet, and moved away from the machine with the remote display. We ran the machine until it tripped, and saw on the display that constant current wasn't the problem; it was the inrush current from a chattering master contactor. Using Min/Max to identify a continual inrush current, we found that the problem was a loose connection on one of the terminals to the contactor coil. The contactor energized the hydraulic pump circuit, which helped us rule out the pump's solenoid circuitry.

With the 381 we were able to rule out the other possibilities quickly because we could troubleshoot the machine while it was in operation. Having the right troubleshooting tools absolutely helps us keep our production process running smoothly.

