

## Customer success story

# CML Enterprises Inc. Argonne,

## Maximizing productivity and creating a solid documentation system

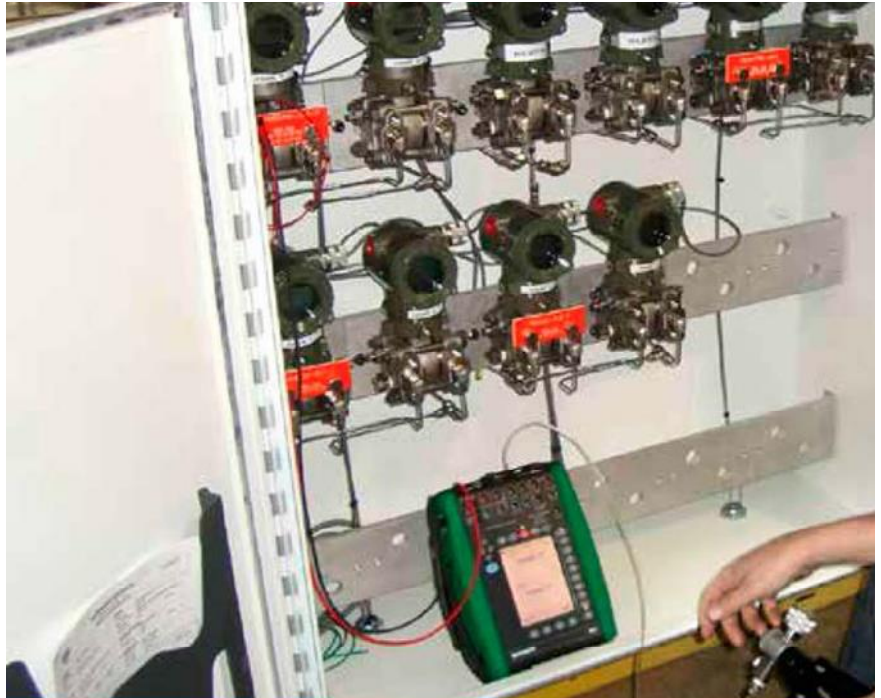
**C**ML Enterprises Inc. (CML) specializes in process control instrumentation including calibration services and repairs. CML operates an in-house repair and calibration shop as well as on-site plant services. Calibration services and repairs are a very necessary function to their customers to keep instrumentation running properly. CML utilizes Beamex MC5 multifunction calibrator extensively to calibrate devices for customers during semiannual or annual maintenance outages at various manufacturing and utility facilities. They also utilize the Beamex CMX Professional calibration management software to provide detailed documentation.

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One of the U.S. Department of Energy's largest national laboratories for scientific and engineering research is Argonne National Laboratory (ANL), located just outside of Chicago. At the location, over 200 research projects conducted by fourteen research divisions, seven national scientific user facilities, nine centers and joint institutes are undertaken. Advanced Photon Source (APS) is the biggest of Argonne user facilities comprised of three research divisions. The APS is one of the



**Manager Rob Lefley uses an MC5 calibrator and a pump to calibrate a pressure transmitter.**

most technologically complex machines in the world. This premier national research facility provides the brightest x-ray beams in the Western Hemisphere to more than 5,000 scientists from around the United States and the world. These scientists come to the APS from universities, industry, medical schools and other research institutions.

### **Calibration service with Beamex instruments**

CML was chosen as ANL's calibration provider. Their role in the project at ANL is to perform calibration, and document and manage all calibration information as it relates to the Yokogawa DP Transmitters within the APS facility. Efficient and safe use of the Beamex MC5 multifunction calibrator with the CMX Professional calibration

management software created quality operations and valuable documentation.

Rob Lefley, Manager at CML, and responsible for executing CML's calibration program. Personal experience with Beamex equipment led Rob to choose Beamex as the calibration vendor for CML. "Back in the mid-90s, with my previous employer, I personally had purchased and used the Beamex MC5 multifunction calibrator and CMX software products with very good results. So when CML decided to move into the calibration business, Beamex was the first and only place I called," Rob explains.

### **Critical procedures**

As part of the personnel safety system (PSS) at APS, which is designed to prevent radiation exposure, the



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instrumentation for resistivity and PH monitoring. Beamex calibrators allow calibration to be done in-place without the need to remove transmitters, saving considerable time and funding. Rob explains, “The ease of use and the fact that I can be completely mobile with all the portable equipment, makes it very convenient to take it to a customer site and perform the necessary calibrations of their instruments, return back to our shop, download the information and print out the calibration certificates.”

#### Quick and efficient calibration

A specific APS data base is designed and maintained by CML using the Beamex CMX calibration management software. ANL supplies CML the with the location, tag number, chain A/B, serial number, high pressure range, and high flow range in GPM. All of this information is entered into the CMX along with the model number and any additional notes or information as required. All transmitter information is then downloaded to the MC5 multifunction calibrator to be used in the field.

Each transmitter is disconnected from their respected impulse lines and hooked up to the MC5 and a hand-held pressure source. A three-point up-and-down calibration (0.50 % and 100 %) is performed by applying actual input pressure in inH2O to the transmitter and

equipment protection system utilizes high-accuracy differential pressure transmitters to ensure sufficient water flow through critical components.

It is critical that the PSS system functions properly and therefore the performance of the system must be verified annually and calibration of the transmitters performed tri-annually. Because APS operates continually on 24-hour basis, with the exception of three one-month maintenance periods per year, 180 PSS transmitters are calibrated in 60 unit batches during the maintenance periods. In addition to transmitters in the PSS system, over 300 units are used throughout the APS for measuring flow that is then used for critical systems interlocks.

Due to the success of the calibration process in the PSS systems, consideration is given to Beamex equipment to calibrate many critical differential pressure transmitters, RTD/transmitter combinations and water quality

## → SOLUTION

### Description

- Beamex MC5 multifunction calibrator
- Beamex EXT600 pressure module
- Beamex CMX Professional calibration management software package
- Beamex PGM / PGV pump kit
- Beamex PGXH hydraulic hand pump kit

### Main benefits

- Ease of use
- Portability
- Versatility

recording the mA output, which will equate to a specific sq. ft. flow rate. The “As Found” and “As Left” results for each transmitter is saved on the MC5 and uploaded to the Beamex CMX calibration software. Calibration certificates are printed and/or stored electronically as PDF files. They are provided to ANL for full traceability.

Being a manager in a service company, Rob recognizes the importance of customer support. “Our overall experience has been very positive; our customer is very satisfied with both CML and Beamex. We have got great support from the Beamex Team in Atlanta and Colorado,” Rob explains. Recently, Rob performed 60 documented calibrations in 2 days. This is the largest amount of instruments that CML has calibrated in such a short period of time. Although it took hours of preparation, Rob is now set up to perform “Round 2” of 60 calibrations. All in all, CML and ANL have both maximized their productivity and created a solid documentation system through the use of Beamex equipment and software.