

## **Leveraging Ethernet and process control technology advancements to extend critical asset life**

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30 minute presentation

### **KEYWORDS**

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### **ABSTRACT**

Today most municipalities spend great sums of money maintaining their critical assets and process equipment in general. With the reduction of maintenance personnel, municipalities have to begin to better leverage communication technology advances and intelligence built into modern process control technologies. The process equipment can be configured to present to operation and maintenance personnel a great deal of diagnostic information to help remotely annunciate equipment health to insure long term proper operation. Advances in technology allow this as a very cost effective alternative to traditional approaches.

Pumps have outgrown their role as simple mechanical workhorses. With the inclusion of the process control system "computing capability," we now can manage health of the pump and motor including energy consumption. With the embedded intelligence, the control system can become a great tool to monitor and implement more lean maintenance programs thus improving equipment health visibility and reducing the amount reactive maintenance required.

Improvement in plant floor connectivity with Ethernet technology also offers significant advantages. We now can leverage those advancements in communication technology to improve productivity and reliability of motors and pumps. By monitoring power, current and, voltage we can detect 81% to 90% of motor failures, plus prevent some pump failures before they happen. With the addition of vibration monitoring customers can have a single pump control solution to monitor all critical mechanical and electrical characteristics and provide early detection and annunciation of common problems like pump cavitation, motor overtemp, or bearing problems. It can also provide tools to improve water distribution pressure management and energy consumption.

Attendees will learn how these technology advancements at one Michigan County have allowed their new 35MGD water plant and water intake pipeline to leverage their investments in process control to remotely monitor, extend equipment life and reduce ongoing operational expenses of motors and pumps.

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