Equipment Q&A: Water & Wastewater

Submersible Solids-Handling Pump

Tony Nicol, Submersible Products Manager, The Gorman-Rupp Co., www.gormanrupp.com [1]

“The Vortex pump—part of the Infinity Series of submersible, non-clog solids-handling pumps—uses patent-pending Staggerwing® vortex impeller technology to increase pumping efficiency by 42 to 48 percent. Plus, a new feature allows for quick in-the-field cable changing: When you take the cable assembly apart there are four bolts and snap-together color-coded connectors.”

Integrated Process Automation and Asset Management

Charlie Norz, Product Manager, WAGO Corp., www.wago.us [2]

“We have an industrial computer that directly patches to I/O modules; a remote node on the computer talks over PROFIBUS. The modules are able to perform power and energy management by taking in current and voltage signals from a three-phase motor, for example. There is also a module for vibration monitoring using a piezoelectric sensor. The root-mean-square of the vibration value is displayed in the programming software. You can set alarm limits, and as the machine or bearing wears out, an increase in vibration trips the alarm and sends a warning that something is wrong.”

Macerator/Conditioner Pump

Jeff Seaton, Sales Manager, Boerger Pumps, www.boerger.com [3]

“Our macerator/conditioner pump has large inlets and high-flow capabilities. The set of stationary knives can be positioned to determine the throughput of the unit and the solids reduction that is required. For an application with a lot of foreign debris, we can configure the stationary bars in a way that forces the large debris out into the integrated rock dropout.”

High-Pressure Relief Valve with Surge Protection

Mark Gimson, Account Sales Manager, Singer Valve Inc., www.singervalve.com [4]

“In a piping situation, not only are you concerned with overpressures, but also surges. If a pump suddenly loses its power, you run the risk of column separation or surges coming back at high pressures, and damaging the system. You need a valve that opens super fast. On a loss of power, this [pneumatic Dynamic Lifter] valve can be opened very quickly. When the valve is open, it allows air back into the line and will be open when the surge returns, taking care of any overpressures that you may see in the system.”

Control Valve Actuator with Fail-to-Position Capabilities

Steve Fitzsimmons, Product Sales Manager, Rotork, www.rotork.com [5]

“Our new control valve actuator can be used in place of a pneumatic spring diaphragm. Once you apply power to it, you don’t need air or a smart positioner, and it is sealed for life. It also has 0.1 percent resolution—a result of the brushless DC motor and permanently lubed gear train. Supercapacitors—which charge and discharge very quickly and don’t wear out over time like batteries—are used for fail-to-position capabilities. They allow you to position the valve closed, open, in place or anywhere in between.”

Impingement Tank Cleaning

Jackie Debellis, Gamajet Cleaning Systems Inc., www.gamajet.com [6]

“Impingement cleaning uses pressure and flow, which creates a mechanical force, to clean the interior of any vessel or tank. For wet wells, man wells and lift stations, the machine is lowered down into the tank where it emulsifies any bacteria or grease. It uses significantly less water and cleans a lot faster than most applications. Many times three guys are used to clean one wet well and it takes about two hours—impingement cleaning takes 10 to 15 minutes.”

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