

Processing

SOLUTIONS FOR THE PROCESS INDUSTRIES

FOCUS WEFTEC Preview

p6

Grinder and screening system for wastewater pump stations

The Channel Monster XD 3.0 is an ideal grinder and screening system for wastewater pump stations. According to the manufacturer, the XD 3.0 is the world's largest, most powerful sewage grinder at 13-feet-tall, weighing 9,300 pounds and producing seven tons of cutting force at peak loads. The Channel Monster combines rotating screening drums and a Muffin Monster® grinder to shred solids while processing up to 59 million gallons per day. This combination is ideal for pump stations since the grinder shreds rags, plastics, wood and trash so particles flow easily through pumps and pipelines. The new Channel Monster XD 3.0 has multiple motors—a 15-horsepower grinder and one-horsepower for the drums. The grinder has larger 3-inch hex drive shafts and stainless steel coil drums with 1/2-inch-diameter rod. This new design features larger cutters, shafts and housings so the grinder can process heavy debris and first flush storm loading. **Booth 1831** at WEFTEC.



JWC Environmental
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featured article

Wastewater treatment systems can experience fluctuations and variations in performance, leaving companies to scramble for a solution. Variations in effluent flow and strength during different production shifts at food processing plants may wreak havoc on the performance of a company's wastewater treatment system. Mark Eklund from WEFTEC exhibitor Columbian TecTank discusses why companies should consider implementing an equalization tank to solve these problems in this *Processing* exclusive article. To view this article, turn to **page 20**.



New wireless digital control for valve actuators

The Pakscan P3 modular control system now offers the addition of a network card option that enables users, including control-room personnel, to communicate wirelessly with the company's valve actuators in the field. The wireless capability operates on the 2.4 GHz frequency and has a line-of-site operating range of approximately 70-meters indoors and 1,000-meters outdoors. **Booth 1801**. For more information on ISA Show Preview, go to **page 29**.



Rotork Process Controls
www.rotork.com

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**ISA
EXPO 09**
6-8 October
Reliant Center, Houston, TX
Automation and Control
Technology and Technique

New i-FRAME™ monitoring added to all ANSI pumps

The i-FRAME onboard standard pump intelligence is now available on all of the company's ANSI process pump models. Regardless of the application requirements, there is now an i-FRAME pump that will provide continuous 24/7 monitoring. Besides optimizing pump reliability, the i-FRAME family allows plant personnel to minimize inventory (costs and warehousing space) and downtime. The i-FRAME's stainless steel condition monitor, i-ALERT™, is nested securely atop the power end to measure critical vibration and temperature readings. **Booth 3003** at WEFTEC. For more information on Pumps & Seals, go to **page 41**.



ITT Goulds
www.gouldspumps.com

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New material flow aid prevents bridging, rat-holing

ActiFlow Smart Bulk Solids Activator reliably prevents bridging and rat-holing of cohesive bulk materials in stainless steel hoppers. ActiFlow is a non-product contact device, consisting of a patent-pending vibratory drive and intelligent control unit. In applications involving difficult flowing materials, ActiFlow eliminates the need for mechanical agitators with secondary motors and gearboxes, as well as the need for flexible side-wall agitation devices or aeration pads. **Booth S-6816** at Process Expo. For more information on Pack Expo Preview, go to **page 36**.



K-Tron Process Group
www.ktron.com/ActiFlow

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Turning up the Heat

How nanotechnology-based coating can increase performance of heat exchangers

Heat exchangers are an integral part of any heat or energy process. They are widely used in a number of industries such as air conditioning, textile, power plants, chemical and petrochemical plants, refining and many others to provide efficient heat transfer from one medium to another. Due to their use on a large scale for both heating and cooling processes in many industrial applications, improving their efficiency can have a wide overall impact on a plant facility and its energy use.

The efficiency of heat exchangers lies in how well they can transfer heat from one medium to another with as little loss as possible. Lost heat energy equates to expense. The most efficient means of reducing energy loss from heat exchanger processes would be through insulation. However, insulation of heat exchangers has been difficult and nearly impossible with traditional fiberglass, rockwool and similar types due to their bulk and how fast they breakdown from moisture infiltration. Heat exchangers can be subject to both steam and condensation, so the perfect insulation for them would be one that was resistant to moisture, was in a coating form so it could be sprayed onto the exterior of any size and type of exchanger, and one that would also protect the equipment from corrosion.

Through the science of nanotechnology, this new insulation has become a reality. Industrial Nanotech, Inc. began producing Nansulate® thermal insulation and corrosion prevention coatings in April of 2004, and since that time, heat exchanger insulation has been one of their key markets.

At Erenko Textile, the plant did side-by-side trials on same capacity machines at 60 degrees C process temperature over 60 minutes. They visually counted the number of times steam supply valve is opened up. These machines have automated temperature controls, so if the temperature drops to 58 degrees C, the valve opens up, and then closes when the target

temperature of 62 degrees C is reached. Over a period of 60 minutes, the insulated machine required two steam supply cycles, whereas the uninsulated machine required 24 steam supply cycles.

The technology behind this next generation insulation incorporates a nanocomposite with extremely low thermal conduction and a hydrophobic nature into a water-based acrylic latex, giving the coatings the ability to provide thermal insulation, corrosion resistance and mold resistance in a thin layer. In ISO standard testing for thermal properties the coatings were shown to block 34.8 percent of thermal transfer (at a thickness of approximately seven mils), and have passed 24 cycles of the GM9540P Accelerated Corrosion Test. The technology offers a novel combination of benefits that can quickly decrease energy and maintenance costs in plant facilities.



Industrial Nanotech, Inc.
www.nansulateindustrial.com
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TUF-LOK® PIPE COUPLINGS Ring Grip Series 688 & 698

The Tuf-Lok ring grip pipe coupling is a rugged, heavy duty, self-aligning and self-grounded pipe coupling with a high end pull. It can be used for almost any application where pipe ends need to be connected. The Tuf-Lok coupling installs quickly and aligns pipe ends with little effort.

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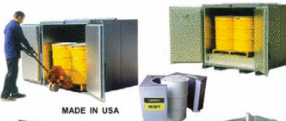
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- Smooth internal connection
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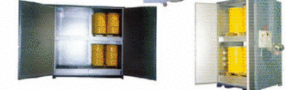
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