

SEPTEMBER 2023

MPT

MODERN PUMPING TODAY®

PROVIDING SOLUTIONS FOR THE WORLDWIDE PUMP INDUSTRY

WEFTEC FEATURED EXHIBITORS

THE MUST-SEE COMPANIES
FOR 2023

BREATHE
NEW LIFE
INTO OLDER
PUMPS
*THE RIGHT KNOW-HOW
EXTENDS PUMP LIFE*

POUR ON
THE JETS
*HEAVY SLUDGE
TANKS DEMAND
POWERFUL
MIXERS*

WWW.MPTMAG.COM



MADE IN
AMERICA

OPERATIONS
CHALLENGE



FEATURED IN
2023 WEFTEC



CONDITIONING PUMP

- Mounted on a portable stand with a high-velocity mixing nozzle
- Saves you from costly clean-out cycles and maintenance
- Use for multiple applications at a single job-site, facility or municipality
- Reliable chopping and mixing of the wet well

SELF-PRIMING PUMP

- Self-priming up to 25'
- Heavy duty cartridge design assures dependability
- 4" - 10" discharge available
- Available in direct or belt drive



MADE IN AMERICA
888-249-CHOP | CHOPPERPUMPS.COM



COME VISIT US AT:

weftec[®]
the water quality event™



CHOPPER PUMP

- *The original chopper pump*
- *Centrifugal pump with the unique ability of chopping all incoming solids prior to pumping*
- *All wear components are cast steel and heat treated for maximum impact and wear resistance*
- *Non-clog guarantee on all chopper pumps*



ROTAMIX PUMP

- *Reduces sludge volume*
- *Includes 10-Year full Nozzle Warranty*
- *Allows continued mixing until tank is empty*
- *Improves volatile solids reduction*
- *Prevents clogging with the Vaughan[®] Chopper Pump*

Since 1960, Vaughan Company has been manufacturing the toughest no-clog pumps in the USA. Our 3rd and 4th generation family-owned and operated company builds cutting-edge products that are built to last and keep things flowing smoothly.

**SEE US AT BOOTH
#S-1412 & N-6831**



PORTABLE WITH PUNCH.

weftec
the water quality event™

 **OPERATIONS
CHALLENGE™**

SEE US AT WEFTEC Booth# S-1412 & N-6831

CONDITIONING PUMPS

The Vaughan Conditioning Pump™ is a beast just below the surface. We mounted our submersible Chopper Pump to a portable stand and super-charged it with a high-velocity mixing nozzle. The result is a powerful pump that can be used in multiple applications at a single site.

Choose the unmatched reliability of Vaughan.

SEE THE
PUMP IN
ACTION



GUARANTEED PERFORMANCE | NO MOVING PARTS IN THE TANK | FOCUSED MIXING

888-249-CHOP | CHOPPERPUMPS.COM

Vaughan
Unmatched Reliability

NEW TOOL



Stop leaks from
bolted tanks...

**WITHOUT
DRAINING
THE TANK**



A remarkably
simple solution



Works with any
tank using
1/2" x 13 hardware



Water Tanks



Wastewater Tanks



Dry Storage Tanks

See it in action at bolt-boss.com



Prevent \$thousands in losses and \$millions
in potential liabilities with Bolt Boss in your
bolted tank maintenance arsenal.

Simply screw Bolt Boss onto bolt threads,
inject sealant, set, and remove.

Learn more at bolt-boss.com
or call us at 1-844-621-6221

B **BOLTBoss**
PATENT PENDING



COVER PHOTO
Courtesy of Vaughan

A NOTE ON THIS ISSUE:

Welcome to the September issue of MPT! In our Case Studies section, Soren Rasmussen of Landia illustrates two success stories of their vaunted JetMix, one of the company's many simple, yet highly effective mixing solutions (pg. 20). As you'll see, even when the mix gets tough, the JetMix powers through.

In our Pump Solutions section, a trio of experts from Sulzer weigh in on "Breathing New Life into Older Pumps" (pg. 32). As most pump owners know too well, even the most reliable equipment will one day reach the end of its service life. However, with the right know-how and wise investment, the end of the road for many pumps can be pushed a little farther back. Find out how.

Lastly, don't forget to check out our special section (pg. 13) featuring MPT's choices for must-see exhibitors at this year's WEFTEC. From long-established international brands to the newest kids on the block, each of these companies are worth working into your schedule at the show. See you there!



J. CAMPBELL, Editor
Modern Pumping Today

EDITORIAL ADVISORY BOARD:

TERRY BELL Product Manager, ABB

ROBERT G. HAVRIN Director of Technology, Centrisys Corporation

MICHAEL MANCINI Consultant and Trainer, Mancini Consulting Services

JOHN M. ROACH Engineering Manager for New Product Development, Trebor International, Inc.: A Unit of IDEX

LISA RILES Business Development Manager, Wastewater Pumps, Xylem Inc.: Flygt

FRANK KNOWLES SMITH III Executive Vice President, Blacoh Surge Control

GREG TOWSLEY Director of Regulatory and Technical Affairs, Grundfos

TREY WALTERS, P.E. President, Applied Flow Technology

MPT

Modern Pumping Today®

WWW.MPTMAG.COM

3100 Lorna Rd., Ste 101
Birmingham, AL 35216

J. CAMPBELL *Editor*

jay@mptmag.com

TONYA BROWNING *Vice President*

tonya@mptmag.com

JEFF FLETCHER *National Sales Manager*

jeff@mptmag.com

LISA AVERY *Art Director*

SETH SAUNDERS *Digital Media Specialist*

INGRID BERKY *Office Manager*

SUBSCRIPTIONS

For all changes, go to:

WWW.MPTMAG.COM

Click the **SUBSCRIPTIONS** button
in the main menu



WWW.HIGHLANDSPUBLICATIONS.COM

3100 Lorna Rd. Ste. 101 | Birmingham, Alabama 35216

TIM GARMON

CEO

RUSSELL HADDOCK

President

CHRIS GARMON

CFO

DONNA CAMPBELL

Vice President, Editorial

TONYA BROWNING

Vice President

No part of this publication JULY be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage-and-retrieval system without permission in writing from the publisher. The views expressed by those not on the staff of Modern Pumping Today, or who are not specifically employed by Highlands Publications, Inc., are purely their own. All Industry News material has either been submitted by the subject company or pulled directly from their corporate website, which is assumed to be cleared for release. Comments and submissions are welcome, and can be submitted to jay@mptmag.com.



@modpumpmag

NEW! 40,500-square-foot facility in
Southaven, MS, opening early 2024.

NOW, THE EASTERN U.S. CAN GET WITH THE **FLO**.

Our New SIMFLO-Memphis Region Facility Will Provide Industry-Leading Quality Pumps, Inventory Availability and Service to the Eastern U.S.

A trusted name is expanding its service pipeline. We offer best-in-class custom pumps, technologies and products for major industrial users, including municipal water services, manufacturing, mining, chemicals, hydrocarbons, saltwater extraction and agricultural applications. So, if moving water is critical to your business' success, SIMFLO can help you do it best.

TEXAS | ARIZONA | MISSISSIPPI

CONTENTS

INDUSTRY NEWS

- What's happening in the industry** 6

TRADE SHOW

- WEFTEC 2023 Featured Exhibitors** 13

CASE STUDIES

- Making it look easy** 20

Landia JetMix covers sludge tanks from north and south

MAINTENANCE & RELIABILITY

- Charging through with temporary power solutions** 24

Meeting the challenges of utility demand during peak seasons and severe weather

Part 1 of 2

- Choosing the best alternatives in industrial analytics** 28

A PI Server data visualization tools buyers guide

Part 1 of 2

PUMP SOLUTIONS

- Breathing new life into older pumps** 32

Combining OEM knowledge, legacy doesn't mean end of life

MOTOR SOLUTIONS

- Exceeding NEMA Premium efficiency standards** 38

Cast-iron motors bring new efficiency to harsh environments

SEALING SOLUTIONS

- Holding it all together** 40

An overview of EP31 high-strength resin applications

MODERN PUMPING PRODUCTS

- Featured Product** 44

The Vaughan Conditioning Pump™: A Beast Just Below the Surface

EFFICIENCY POINT

- The sun shines for everyone** 48

Unique partnership expands solar energy into low-income areas



20



24



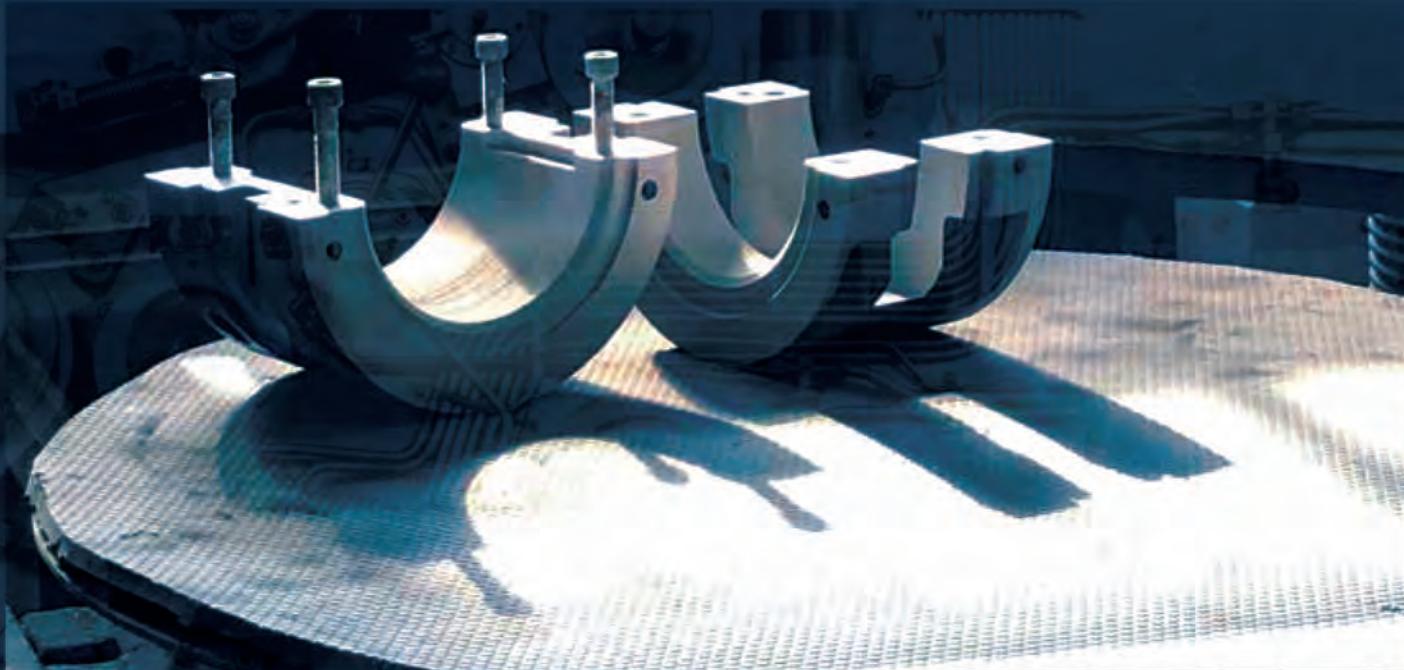
28



32



44



Babbitt Bearing Repair, Refurbishment & Manufacturing

BABBITT BEARING REPAIR

We can help you with babbitt bearing repair, rebabbitting, and rebuilds. When you choose Fusion for babbitt bearing repair, your parts will be returned to their original condition or better.

ARC FLAME SPRAY

Arc flame spray builds up metal on worn bearings and components; they are then machined to OEM specifications. This application also allows us to apply other arc spray metals like bronze, steel & cast iron as well.

REVERSE ENGINEERING

Our reverse engineering team possesses the expertise and tools to duplicate bearings that are no longer available from the original OEM supplier. We can help you with spare parts and when bearings are beyond repair.

CENTRIFUGAL CASTING

Centrifugal casting offers a stronger bond and the best bearing integrity; extending the life of your bearings. On top of that, we assure quality with dye penetrant testing and an ultrasonic bond certification.

NEW MANUFACTURE

Our facility is equipped to manufacture bearings to exact OEM specifications. On top of drawing documentation and support components, we offer quick turnaround times and high-quality end products.

ACCESSORIES

We have bearing parts and products available for sale; including hydrogen seals, oil rings, oil seals, resistance temperature detectors, thermocouples, and thrust plates. Give us a call for a quote on bearing accessories.

ASTM VIRGIN TIN BABBITT

98-100% MOLECULAR BOND GUARANTEE • IN-HOUSE ULTRASONIC LEVEL II TESTING

FUSION
BABBITTING CO., INC.

Since 1989

CALL (414) 645-5800 OR EMAIL SALES@FUSIONBABBITTING.COM

Milwaukee, WI

TEXAS-BASED SIMFLO EXPANDS OPERATIONS IN MISSISSIPPI, MEMPHIS

Simflo will soon open its third U.S. location in Southaven, Mississippi, part of the greater Memphis region. The company, which has been headquartered in Lubbock, Texas, since 1951, also operates a facility in Willcox, Arizona, and recently completed construction of a new state-of-the-art 35,000-square-foot Engineered Products Facility in Lubbock, which is one of the largest and most advanced vertical turbine pump test facility in North America.

Renovations will soon commence on Simflo's 40,500-square-foot Southaven facility, which is located on 3.5 acres at 8500 Aaron Drive. Located just eight miles from Memphis International Airport and 14 miles from the International Port of Memphis, its central U.S. location and proximity to major shipping hubs allows Simflo to better serve its growing customer base in the eastern and southern United States.

Included in the project scope is a complete interior remodel to modernize the office space, with all-new flooring, windows, ceilings, and LED lighting. Simflo is also making significant upgrades to its warehouse, which will include bridge cranes, expanded exterior doors, and new concrete and exterior storage adjacent to the facility for easy commercial vehicle loading and unloading.

ACEEE REPORTS ENERGY EFFICIENCY EFFORTS STAGNATING

Energy savings from electric utilities' efficiency programs for customers have stagnated in recent years, according to the Utility Energy Efficiency Scorecard released today by the American Council for an Energy-Efficient Economy (ACEEE). The Scorecard evaluates fifty-three of the largest U.S. electric utilities on their incentive and other programs for energy-saving improvements and finds that energy savings dropped 5.4 percent between 2018 and 2021.

Utility programs are the primary drivers of energy savings in most states, and leading utilities can serve as models. Eversource Massachusetts topped the Scorecard for the third consecutive time. Rounding out the top five utilities are Pacific Gas & Electric in California (#2), National Grid Massachusetts (#3), Commonwealth Edison in Illinois (#4), and DTE in Michigan (#5). Overall, the report finds a wide range of performance, but only fifteen of the utilities earn at least half of the Scorecard's points.

"Amid ever-higher temperatures and increasingly common extreme weather, most utilities, regulators, and state policymakers should do a lot more to help reduce energy waste," says Mike Specian, utilities manager at ACEEE and lead author of the Scorecard. "Now is the time for bold action by all utilities and states to scale up energy efficiency efforts rapidly."

BPK FIELD PACK

All-in-one shaft grounding system that combines the superior protection of Helwig's **Bearing Protection Kits** and the versatile **MultiFit Brackets**.

- Compatible with 80% of all motor shaft sizes
- Less than \$1,000 for (8) kit + bracket combinations



**HELWIG®
CARBON
PRODUCTS, INC.**

www.helwigcarbon.com

XP2F ➤➤➤➤➤



A non-intrusive flow metering and data acquisition solution for new and existing valves.



www.cla-val.com



Make the easy switch

Let's face it, there's never a good time for failed equipment, especially when it's preventable. Clogged pumps lead to downtime, and downtime leads to frustration, to say the least. With thousands of installations solving clogging issues, the XFP submersible pumps, utilizing the Contrablock Plus system, have proven to prevent problems before they even start. With superior solids and rag handling and lower maintenance costs for long-term reliability, the choice is easy when it comes to replacing your failing equipment.

And to make it even easier, the XFP is available with a wide range of competitor retrofitting solutions for drop-in replacements, saving time and costly rehabilitation of a pump station. From retrofit brackets to controls to custom solutions, Sulzer makes it easy to get what you want.

Don't you think it's time for change?

www.sulzer.com

Visit us at
WEFTEC 2023
Booth 3625



GE VENOVA ADDS TO LEADERSHIP TEAM

Ken Parks will join GE Vernova as chief financial officer (CFO), effective October 2, 2023 and Vic Abate, who currently leads GE Vernova's Onshore Wind business, will expand his responsibilities effective immediately to lead the full Wind segment across GE Vernova, which also includes Offshore Wind and LM Wind Power businesses.

"It's a pleasure to welcome Ken to the GE Vernova leadership team as our chief financial officer," says Scott Strazik, CEO of GE Vernova. "He brings unique and valuable experience gained over a nearly forty-year career in finance. His proven and extensive track record in helping public companies transform and thrive will be a major asset to GE Vernova as we move towards our planned spin-off and continue to work alongside our customers to accelerate the energy transition."

"I'm very pleased that Vic will expand his role at GE Vernova and lead across our critically important Wind segment, where we are working to accelerate business improvement and drive the energy transition forward," continues Strazik. "Vic and I have worked closely together for nearly a decade across GE, and I've seen his ability to successfully impact business transformation from multiple vantage points. We are fortunate that GE Vernova will continue to benefit from his demonstrated leadership and operational focus!"

WE DELIVER A PATTERN OF EXCELLENCE



Hoosier Pattern continues to be an industry leader by setting the bar high to exceed our customer's expectations. With our state-of-the-art technologies along with our highly-experienced team members, Hoosier Pattern continues to deliver the industry's best additive manufacturing molds and cores on time and every time.

WE EXCEED EXPECTATIONS

- » On Time Delivery
- » Quality Products
- » Experienced Team



Get the latest information
HoosierPattern.com

See our virtual tour
HoosierPattern.com/tour

Call Us Today at 260.724.9430



WORLDWIDE CENTRIFUGAL PUMP MARKET EXPECTED TO REACH \$51.5 BILLION

Centrifugal pump market size is expected to reach \$51.5 billion by 2028, at a CAGR of 5.4 percent during the forecasted period, as per the recent study by the research firm MarketsandMarkets. The requirement for desalination and water treatment has also contributed to the growth opportunities for centrifugal pump manufacturers. Desalination plants rely on centrifugal pumps for seawater intake, brine circulation, and product water transfer. As water scarcity becomes a pressing issue in many regions, the demand for desalination and water treatment solutions is rising, thereby driving the demand for centrifugal pumps in industrial sector.

Based on type, the market has been categorized into overhung impeller, between bearing, and vertically suspended. The market is dominated by overhung impeller type of centrifugal pumps. One common application of overhung impeller centrifugal pumps is in water supply systems for residential and commercial settings. Their compact design makes them a preferred choice in these environments where space is limited. As a result, the overhung impeller segment is projected to dominate the centrifugal pump market during the forecast period, driven by their increased usage in industrial and commercial applications.

VISIT US AT WEFTEC

<< Booth #4262 >>



**SUN STAR
SUBMERSIBLE MOTORS**



SUN STAR ELECTRIC, INC.

An Employee Owned Company

SUNSTARUSA.COM

7722 34th Street, Lubbock, TX 79407

1-800-782-9675

SLICE IT. DICE IT. PASS IT.

ORGANIC SOLIDS ARE NO MATCH FOR
GORMAN-RUPP SUPER T SERIES®
PUMPS EQUIPPED WITH
THE ERADICATOR PLUS™
RETROFIT KIT.



**ERADICATOR®
PLUS**

Flushable wipes, trash bags, mop heads, rags and other stringy materials can be hard on pumps – that's why your facility needs a dependable solution for handling solids-laden wastewater. Gorman-Rupp is now offering Eradicator Plus™ solids reduction upgrade kits for existing Super T Series® self-priming pumps currently installed in wastewater treatment, industrial by-product and agricultural applications. The extra-thick, self-cleaning wearplate is designed to cut and shred organic solids entering the pump, while the rugged, continuous vane impeller prevents the build-up of debris and keeps your pump operating at peak efficiency. A lightweight inspection cover allows for easy access to the inside of the pump without disturbing wearplate-to-impeller clearance. Trust Gorman-Rupp to keep your operation running smoothly month after month, year after year.



For more information, call Gorman-Rupp at 419-755-1011
or visit GRpumps.com to find a distributor near you.

**GORMAN-RUPP®
PUMPS**

The Pump People®

weftec | 2023
the water quality event
VISIT US AT BOOTH #1231

SMOLTEK PATENTS ITS FIRST GREEN HYDROGEN TECHNOLOGY

Smoltek Nanotech Holding AB announces that a new patent has been granted, which brings the company's IP portfolio to comprise eighty granted patents. This granted patent is the first of a new patent family, called "Electro Catalyst Support," which is targeted towards the production of green hydrogen.

Smoltek protects the company's innovative technology platform through an extensive and growing patent portfolio consisting of around 110 patent assets. The latest patent is the first of a new patent family, called "Electro Catalyst Support", and regards how to use Smoltek's core technology in electrochemical cells. In this case, how the group company Smoltek Hydrogen can use the technology to radically decrease the amount of iridium catalyst load in PEM water electrolyzer cells as well as increase the output per area of the cell.

"With this new patent family, Smoltek expands its IP portfolio to include the field of green hydrogen production. This is a breakthrough for us as we now can be a key supplier of technical solutions that enable the hydrogen industry to scale up the production of PEM electrolyzers," says Fabian Wenger, head of R&D at Smoltek Hydrogen.

BUILDING ENCLOSURE PERFORMANCE EXPERT RETURNS TO SGH

Simpson Gumpertz & Heger (SGH) is pleased to welcome Alex Kosis back to the firm as an associate principal, bolstering its expertise in building enclosure engineering consulting and sustainable building practices.

He joins SGH's Building Technology group from Denver, Colorado, partnering closely with SGH colleagues in the San Francisco Bay Area; Chicago, Illinois; and throughout the United States. Kosis brings more than fifteen years of experience in the industry, specializing in roofing and waterproofing system design and repair, and thermal analysis for optimal building performance.

"Alex has been a tremendously positive presence at SGH ever since joining us straight out of school. It is gratifying to see our homegrown talent progress from intern to partner and turn into leaders and client-focused problem solvers along the way," says Niklas Vigener, SGH chief technical officer. "We are thrilled to have him back with SGH and look forward to seeing how his professional dedication and personal enthusiasm will create new opportunities for our clients and project partners in Colorado and the Mountain Region. SGH is open for business in Denver!" ■



HIGH CAPACITY INDUSTRIAL DEHUMIDIFIERS

NEW MODELS WITH DIGITAL CONTROLS



Download the
Android App

CALL FOR FAST FRIENDLY FREE ADVICE !

Ebac Industrial Products Inc
East Coast Office
 700 Thimble Shoals Blvd, Suite 109,
 Newport News, VA 23606-2575
Toll Free 1-855-873-6800

West Coast Office
 2060 Chicago Ave, Suite C7,
 Riverside, CA 92507
www.ebacusa.com

NEW PRODUCT

OBTANIUM

**Do you want
ZERO WEAR*
to pump shafts & wear components?**



- OBTANIUM uses a unique method to reduce the contact area between bushing and shaft.
- OBTANIUM is filled with perfectly round ceramic spheres.
- OBTANIUM bearings have been in the field for 15 years, running dry and wet, with NO WEAR on the shaft or wear components.

The components have been in the field for 15 years with no wear on the component or the shaft

Learn more about OBTANIUM
 visit PlasticsMoldingConsulting.com

PRIC, IIC "Near perfect components for the elimination of wear"
*we have not encountered any signs of wear, although we cannot assure the same outcome for all cases.

PlasticsMoldingConsulting.com



Unleashing Water's Potential

Biofouling Solutions



Copper Nickel Coating

Run-of-River Intakes



Coanda Screens

Submerged Intakes



AirBurst/IceBreak Systems

Copper Nickel Alloy • Copper Nickel Coating
AirBurst Systems • IceBreak Systems • Cylindrical Screens
Micro Hydro Intakes • Coanda Screens • Intake Channel Screens

ElginWaterSolutions.com



Visit Elgin's
Booth #3957

Looking for pumping solutions?
Elgin has a full line of heavy-duty
slurry pumps.

HAD ENOUGH CALCIUM NITRATE PRICE INCREASES?

Introducing Anue's Total Solutions turnkey service program for force main H₂S odor and corrosion control.

Enjoy a safer, cleaner, more effective solution and save a lot of money!

Anue's onsite oxygen production, fed to the force main, eliminates H₂S generation at the source. Replace your calcium nitrate usage completely; Anue will operate a plug and play system to ensure desired results.

Anue's service program with its flat monthly cost provides vastly superior performance with a targeted 20% savings versus calcium nitrate.



Contact Anue for more details today!

 **ANUE**
WATER TECHNOLOGIES
AnueWater.com

760-727-2683
sales@anuewater.com

WEFTEC 2023 FEATURED EXHIBITORS

MPT

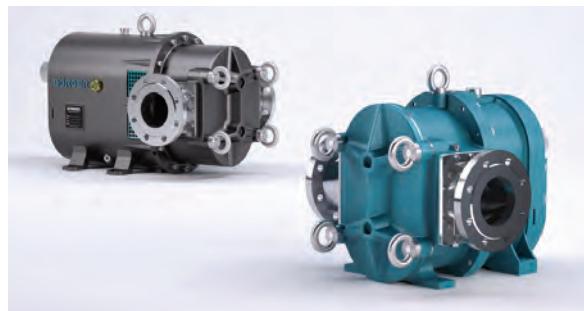
Visit MPT at WEFTEC

BÖRGER
EXCELLENCE – MADE TO LAST

BOERGER
BOOTH #2018

Boerger designs, manufactures, and sells rotary lobe pumps, macerating technology, separation technology, and feeding technology to convey low to high viscous and abrasive media. Key applications can be found in wastewater applications including sludge (primary, WAS, RAS, digested, thickened, etc.), biosolids, grease, sewage, scum, lime slurry, alum sludge, permeate, polymers, etc. Boerger products are designed with maintenance-in-place, which allows for all wetted parts to be easily replaced through the front cover without the removal of pipe or drive systems.

WWW.BOERGER.COM



CRANE

PUMPS & SYSTEMS

CRANE PUMPS & SYSTEMS
BOOTH #2908



Crane Pumps & Systems designs and manufactures innovative pump solutions for the effective and efficient transportation of wastewater, and is focused on developing long-term customer relationships by providing exceptional service and responsiveness. Crane Pumps & Systems produces pumps under six historic brands: Barnes, Deming, Weinman, Burks, Crown, and Prosser, all built in our two factories in Piqua, Ohio. Our focus is on exceptional solids handling pumps in all areas of wastewater, which includes our Sithe Chopper series, Razor Grinder series, and envie3 Dry Run Submersible Solids Handling and Chopper series. Presented for the first time at WEFTEC 2023 are our E36 envie3 pumps—our largest yet! This new launch expands the product line to 12-inch discharge and 125 horsepower, and is available with a new sensing package, which includes temperature, vibration, and seal failure monitoring to give you peace of mind with your most important equipment.

WWW.CRANEPUmps.COM

weftec
the water quality event™

Where the water community comes to connect.



ENVIRONMENT ONE CORPORATION BOOTH #1617



Are you dealing with failing septic tanks? Is I&I from your existing sewer system eating up your budget? Do you have a sewer project with challenging terrain looming ahead? Get after it. ALL-TERRAIN SEWER™ low pressure systems from E/One give you the freedom to sewer anywhere. Environmentally sensitive, economically sensible™: ALL-TERRAIN SEWER low pressure systems are significantly more affordable than conventional gravity sewers, safer than septic systems, and they're a light touch on the land. Plus, ALL-TERRAIN SEWER low pressure systems carry a proven track record of reliability with the lowest life-cycle costs in the industry. Whether it's dead or dying septic tanks or expensive inflow and infiltration, E/One can help. WWW.EONE.COM



BLACOH FLUID CONTROL BOOTH #954

Blacoh offers engineered fluid control products manufactured to exacting standards in a wide variety of sizes, materials, and pressure ratings to suit virtually every application. Blacoh has been improving process system performance, reliability, safety, and productivity for over forty-five years, so find Blacoh products wherever fluid is being pumped. Blacoh products are made in the USA for a reason—nothing gets in the way of providing Blacoh products to customers. WWW.BLACOH.COM



CLA-VAL COMPANY BOOTH #3302

Since 1936, Cla-Val has produced the world's highest quality automatic control valves for diverse industries. Cla-Val has strengthened operations and customer service by enhancing product lines and building state-of-the-art production facilities around the world. With major locations having dedicated training centers, the team provides exceptional industry expertise. Aggressive R&D programs have resulted in advanced electronic and hydraulic control systems that meet the challenges of complex and diverse applications. WWW.CLA-VAL.COM



GORMAN-RUPP PUMPS BOOTH #1231

Gorman-Rupp sets the industry standard for packaged wastewater-handling pumping systems. Our ReliaSource® lift stations are 100 percent custom-engineered, manufactured, assembled, and tested by the experts at Gorman-Rupp. That means when you choose ReliaSource, you choose the ultimate in reliability, long-lasting operation, and value. We precision-match the pumps, motors, controls, valves, pipes, and accessories in every ReliaSource system for maximum compatibility and maximum performance—guaranteed.

WWW.GRPUMPS.COM



Where the water community comes to connect.

KROHNE measure the facts**KROHNE
BOOTH #3805**

KROHNE is a world-leading manufacturer and supplier of solutions

in industrial process instrumentation and offers supporting products and services for one-stop-shopping and in industries as widespread as oil and gas, water and wastewater, chemical and petrochemical, food and beverage, power, minerals and mining, and marine. With flow, level, temperature, and pressure measurement as well as process analytics, KROHNE offers the whole range of process measurement instruments. WWW.US.KROHNE.COM

**ELGIN**
**ELGIN
SEPARATION
SOLUTIONS
BOOTH #3957**

Elgin offers turn-key water intake solutions. Our Coanda screens are found throughout the hydropower, irrigation, and stormwater market, while our cylindrical and flat panel screens are used extensively across the municipal and industrial markets. Designed to deliver water to your system in a way that is both efficient and environmentally safe.

WWW.ELGINWATERSOLUTIONS.COM
**GREASEZILLA****BOOTH #4813**

GreasezillaSM solves fats, oils, and grease (FOG) processing and disposal challenges for water recovery facilities, grease haulers, industrial food processors, and managed waste sites. Greasezilla's separation process repurposes the FOG waste stream into water and clean energy resources, including a low carbon intensity bio feedstock commodity. Without the need for polymers, flocculants, or chemical additives, Greasezilla helps operators meet sustainability goals and lowers costs associated with FOG treatment and disposal. WWW.GREASEZILLA.COM

MELTRIC
A COMPANY OF MARECHAL ELECTRIC
**MELTRIC
BOOTH #8332**

MELTRIC® Switch-Rated and UL-listed plugs and receptacles are the perfect solution for safe and reliable pump connections where watertightness is required. MELTRIC DS and DSN series are designed to make and break connections safely under full load, and they offer arc flash protection. MELTRIC Switch-Rated products are easy to use while providing users with safety, ensuring code compliance, and supporting operating cost benefits. With MELTRIC Switch-Rated plugs and receptacles, cumbersome changeout processes are streamlined, reducing downtime by up to 50 percent. Visit MELTRIC at WEFTEC or our website to learn more about our Switch-Rated products and how they can help you keep your pumps running safely and reliably.

WWW.MELTRIC.COM

Where the water community comes to connect.



PEDROLLO USA BOOTH #2263



Pedrollo USA is the American and Canadian office for Pedrollo S.p.A. and since 1974, a manufacturer of high-quality and high-efficiency pump and related products. These include jet, centrifugal and self-priming surface pumps, submersible pumps and motors, sump/sewage/effluent and grinder pumps, electronic controls, package systems, and accessories. Pedrollo is a family-owned and operated company with sales into over 160 countries. Pedrollo invests significantly in R&D to bring the most innovative products to the many markets we serve.

WWW.PEDROLLO.COM



HOMA PUMP TECHNOLOGY BOOTH #643

HOMA stands behind every product with a generous warranty, extensive spare parts inventory, regional authorized service centers, factory engineers and technicians who are all dedicated to the support of the entire HOMA product line. Whether your application requires a residential grinder or effluent pump, or you are handling an industrial process stream or municipal wastewater, HOMA will engineer a pumping solution for you. **WWW.HOMAPUMP.COM**



Whether you're a seasoned veteran or just starting out in the industry,

WEFTEC is an essential gathering of water quality professionals and is the perfect way to gain a deeper understanding of the challenges and opportunities the water sector faces. Join the global water community in Chicago to explore the future of water quality, and discover new ways to create a more equitable, sustainable future



SIMFLO BOOTH #4262



Lubbock, Texas-based SIMFLO has been a family-owned and privately held company since 1951 and the company continues to lead the innovation of pump technology that is critical to the communities, commercial enterprises, and agricultural areas that it serves. SIMFLO, one of the nation's top providers of industrial, municipal, and commercial-use pumps, will soon open its third U.S. location in Southaven, Mississippi, part of the greater Memphis region. The company also operates a facility in Willcox, Arizona and recently completed construction of a new state-of-the-art Engineered Products Facility in Lubbock, which is one of the largest and most advanced vertical turbine pump test facilities in North America. SIMFLO engineers, manufactures, sources, and delivers best-in-class pump products and technologies for major industrial users, including municipal water services, manufacturing, mining, chemicals, hydrocarbons, saltwater extraction, and agricultural applications. Stop by our SIMFLO Booth #4262 to learn how WE SEE WATER DIFFERENTLY™. **WWW.SIMFLO.COM**



Where the water community comes to connect.


Smith & Loveless Inc.

Above-Ground Pump Stations offer the best choice for pump O&M, safety, longevity, and costs. Everything is above the wet well and inspection of the complete pump station can be accomplished in mere seconds, eliminating all of the confined space hassles and costs associated with pulling sewage-coated submersible pumps from the wet well and accessing confined space valve vaults. Pump clogs are virtually eliminated with the non-clog X-PELLER® wastewater pump impeller due to its unique monoport design that allows it to successfully pass problem flushables and 3-inch solids. QUICKSMART™ Touchscreen Controls offer the most operator-friendly pump experience with remote control and system maintenance reminders. We're taking a complete EVERLAST™ pump station to WEFTEC to show you the better way to pump. See the station and our unique non-clog demonstration at S&L Booth 3431. WWW.SMITHANDLOVELESS.COM

**SMITH & LOVELESS
BOOTH #3431**

**IWAKI
AMERICA**
BOOTH #4757

Iwaki America Inc. is one of over twenty-five global centers for the manufacturing and support of Iwaki pumps. Our sixty-plus years of pump design engineering has made us a worldwide leader of the best chemical handling equipment used in OEM, industrial, chemical process, and semiconductor applications—providing innovative, efficient solutions to a vast range of fluid handling and dispensing challenges.

WWW.IWAKIAMERICA.COM

SULZER **SULZER**
BOOTH #3625

Sulzer is a global leader in the design and manufacture of fluid systems with over 200 years' experience in developing innovative products and services that support greater sustainability of our world's resources. With specialist knowledge in pumps, agitators, mixers, separators, blowers, and purification technologies, Sulzer offers high-performance products with excellent reliability and efficiency.

WWW.SULZER.COM


**TSURUMI PUMP
BOOTH #8100**


Tsurumi Pump is a world-renowned submersible pump manufacturer. The company supplies equipment for a variety of applications including wastewater treatment, mining, construction, water features, sewage bypass and more. Beyond leading pump technology, Tsurumi is recognized for its robust distribution network and one of the largest on-hand inventories in North America. At this year's WEFTEC, the company features the MY line from the Avant family of wastewater products. Avant is the ideal solution for municipal sewage and wastewater with wet and dry pit options and multiple impeller choices. Tsurumi's wastewater process equipment includes FM-approved mixers, dehydrators, aerators and bar screens. As a top exhibitor at the 2023 WEFTEC Exhibition, you can find out more about its Avant line of products by visiting Tsurumi's booth and asking for Chris Bristol.

WWW.TSURUMIPUMP.COM

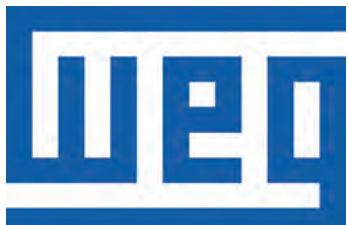


Where the water community comes to connect.



VAUGHAN COMPANY BOOTH #1412 AND #6831

When you are making plans for this year's WEFTEC, don't miss the Vaughan Conditioning Pump™ on full display during this year's Operations Challenge. As a proud sponsor of the Vaughan Maintenance Event, we invite you to come support over fifty teams from around the globe working specific scenarios that include one of our most popular pumps. American-made and built to last, the Conditioning Pump is designed to be used in several different applications to save you from costly clean out cycles and maintenance. With more than sixty-two years of experience, Vaughan Company remains committed to giving customers around the world outstanding service and the most dependable pumping solutions. Stop by and let's talk pumps! WWW.CHOPPERPUMPS.COM



WEG ELECTRIC CORP. BOOTH #1025

WEG is committed to creating quality products and efficient solutions. To achieve this, there is continuous investment in innovation and team work. Helping people reach their goals by living the values of the company is WEG's passion. At WEG, the customer is



also part of the team. Working together we can develop the best solutions. There are many approaches to efficiency at WEG. Whether it be energy saving, to reduce costs, or increase productivity, we work to fulfill the needs of our customers. We never stop because a product works well. We always look for a way to make it work even better. This constant search for improvement has led to the creation of some of the most efficient products in energy saving available on the market. WWW.WEG.NET



Where the water community comes to connect.

REPLACEMENT • REPAIR • RECOVERING



- Manufacturer of the Muniflo Rotary Lobe Pump (originally manufactured by Wemco since 1985)
- We also manufacture aftermarket pump parts for most models of Borger®, Vogelsang®, Lobeline®, LobeFlo® and Muniflo® Pumps
- Specialize in Rotary Lobe Pump Repair

Are you looking for obsolete LobeFlo® (SSP/MGI) pump parts?
We are the answer!



PUMP

www.equipump.com | www.muniflopump.com
800-783-5623 | fax 800-693-5623 | info@equipump.com

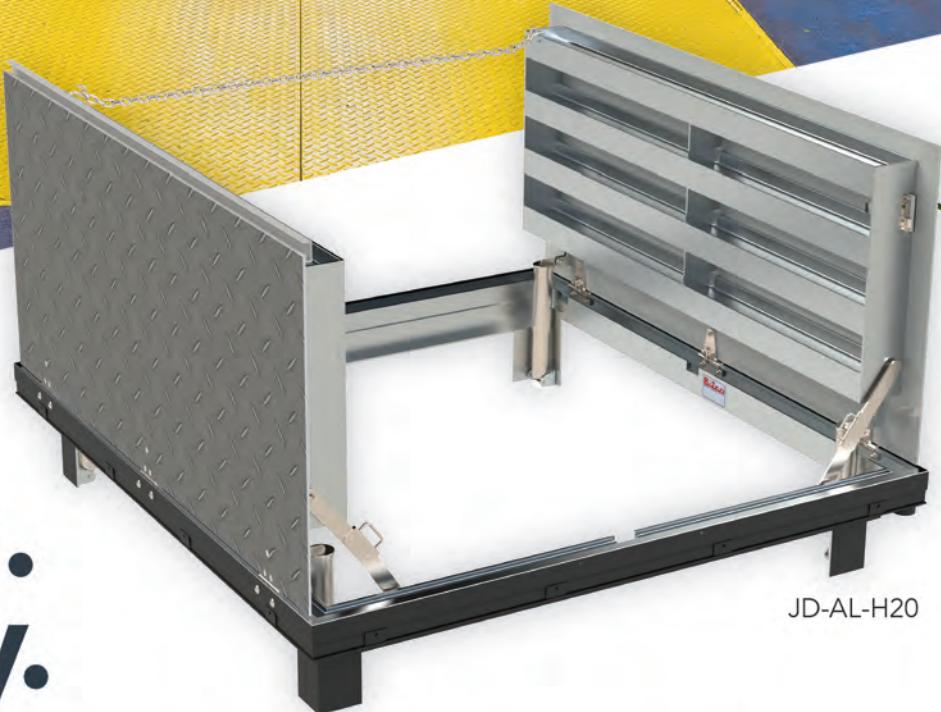
SWITCH TO TEMPERATURE RESISTANT HITEMP 160 PUMP WEAR RINGS & BEARINGS



VESCONITE

www.vesconite.com
vesconite@vesconite.com





Proven. Quality.

For decades, BILCO products have provided dependable access to equipment stored underground or below/between building floors. While they may look like everyone else's on paper, our floor access doors are unequaled in quality, design and operation. Our engineered lift assistance ensures that every door, regardless of size or weight, can be easily opened and closed with one hand. Specify the product that not only is engineered and fabricated to the highest standards, but also survives the test of time.

BILCO.com

Bilco®
TYMAN group

**Experience.
Innovation.**

MAKING IT LOOK EASY

Landia JetMix covers sludge tanks from north and south

BY SOREN RASMUSSEN, LANDIA

JetMix offers the benefits of low energy usage and total cost of ownership plus long-lasting, reliable service.



Landia has seen a marked increase in demand for its wastewater JetMix system, with new orders received from two of the United Kingdom's largest water companies.

The first, in the north, sees seven Landia JetMix units going into operation in sludge tanks, while in the south, a further nine mixing systems have also been specified.

SIMPLE AND EFFECTIVE

One of the many simple, yet highly effective mixing solutions from Landia, JetMix incorporates the first and original Chopper Pump (invented by Landia in 1950), fitted with jetting nozzles specially configured for each tank.

Similar to Landia's proven AirJet aeration system, which continuously reduces the particle sizes of solids, and reduces odors, JetMix is externally-mounted for easy servicing.

Howard Burton, technical sales engineer at Landia, comments, "We were approached by a leading water

company who expressed interest in Landia's technology, and after many meetings and a raft of CFD modelling, they began their rolling program of

upgrades, appointing Framework contractors to handle each project. Around the same time, the other water company was embarking on a



Similar to Landia's proven AirJet aeration system, JetMix is externally-mounted for easy servicing.

major upgrade of one site, and they too chose Landia JetMix."

MIXING MADE EASY

Previously, at Glatfelter, the leading global supplier of engineered materials, Landia's JetMix replaced a very troublesome mixing system for an open-topped 264,000-gallon above-ground (23-foot) glass-lined steel tank used for pH correction.

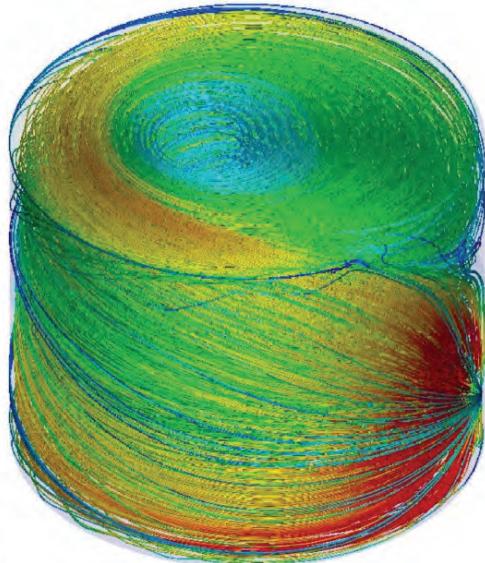
The mixer that was replaced was extremely cumbersome to retrieve, causing health and safety issues and significantly costly downtime due to numerous breakdowns. Now, the retrofitted Landia JetMix ensures that there is no build-up of crust in the centre of the tank, which regularly used to clog up the old pump.

Following the success of the first JetMix system, Glatfelter invested in a further four Landia units, two for a 396,000 gallon vessel, one for a 132,000 gallon tank, and one for a below-ground 39,625 gallon pit, solving significant crusting issues.

BUILT TO LAST

Landia sees the JetMix system as an integral part of building a sustainable water and wastewater infrastructure.

"It is very encouraging to see that water companies are embracing the benefits of low energy usage and total cost of ownership from a product that will give long-lasting, reliable service," concludes Burton. ■



The CFD model visualizes the effectiveness of the JetMix inside the tank.

SOREN RASMUSSEN is the director of Landia, Inc. Landia uses its nearly ninety years of experience to continue to develop new and efficient products and solutions. Together with its customers, Landia is aiming for new heights. Customers get a partner with a strong team of happy employees who focus on what matters most to them: good solutions that solve the task at the lowest possible cost. For more information, call 919.466.0603, email info@landiainc.com, visit www.landiainc.com.

Problem: storm event raises water level in local streams. Water flows back through drain pipe and floods underpass.



Solution: Onyx Duckbill Check Valve prevents stream water from flowing back into drainage systems.



ONYX VALVE CO

www.onyxvalve.com tel: 856-829-2888



**Armadillo
Tough**



OC SERIES



See it in Person
at WEFTEC 2023
BOOTH 643

The HOMA OC Series Impeller provides super-high-head performance with an aggressive cutter system, built to handle even the toughest solids.

Wastewater has evolved. Has your pump?

Reliably monitor the condition of your pumps and avoid unplanned downtime



Automation24
One stop. Smart shop.



Endress+Hauser People for Process Automation

Temperature transmitters

Detection of fluid temperature



Vibration transmitters

Real-time monitoring of system vibration



novus
We Measure. We Control. We Record.

Data loggers

Record measured data from process inputs



SIEMENS

Variable frequency drives

Highly accurate motor speed control



ixon

IoT-Gateway routers

Remote access for system monitoring

All products

IN STOCK

Discover complete solutions at automation24.com

Automation24
Your partner for automation technology



800-250-6772 (free)
mail@automation24.com
automation24.com

CHARGING THROUGH WITH TEMPORARY POWER SOLUTIONS

*Meeting the challenges of utility demand
during peak seasons and severe weather Part 1 of 2*

BY SCOTT MILLIGAN, DISTRIBUTED POWER SOLUTIONS



Raging heat waves, crippling ice storms, devastating drought—extreme weather has continued to accelerate in the past decade, claiming lives and causing untold devastation. Just halfway through 2023 alone, the United States experienced seven confirmed weather-related disasters with losses that exceeded \$1 billion.

With the increasing number of weather disasters, homes and businesses rely on uninterrupted electricity and natural gas more than ever to accommodate their daily needs and take the brunt of emergency situations as they occur. Utility companies need backup or standby power sources to meet needs during peak demand, electricity gaps, off-grid power needs, and outages.

During these critical times, temporary power solutions provide

robust services and benefits to the most vulnerable. This series will delve into the crucial advantages of mobile power solutions and their evolving pivotal role in the ever-growing energy requirements of the utility sector. Read on to explore utilities' key challenges and learn the advantages of partnering with a temporary power provider.

CHALLENGES FACED BY UTILITY COMPANIES

Utility's chief role in distributing power to businesses and homes is ensuring reliable and continuous supply to meet electricity demands. To meet these demands, utility companies must manage the essential infrastructure and systems to generate, transmit, and distribute power efficiently. However, these responsibilities come with significant challenges.

PEAKING DEMAND

Energy demands vary throughout the day, season, and year. Peak times, such as during severe heat waves or ice storms, require high demand, while other times, such as in the middle of the night during relatively normal weather, the demand is low. Balancing these surges in demand requires a sophisticated, real-time understanding of usage patterns. During peak demand periods, utility companies need to be able to meet surging needs.

To meet this demand, utilities must have "peaker" plants that they can bring online quickly for peak demand. Building and maintaining peaker plants can be economically inefficient because they are used infrequently.

GRID STABILITY

Maintaining electrical grid stability

is another significant challenge. Electrical power needs to be generated and used in real-time. The delicate balance between supply and demand must be maintained to prevent power outages. This balance can be especially challenging with renewable energy sources, like wind and solar, which can be intermittent and variable.

UPGRADING INFRASTRUCTURE

Much of the existing electrical grid infrastructure in many parts of the world is aging and needs upgrades or replacement, including power plants, transmission lines, substations, and transformers. However, upgrading this infrastructure can be costly and complex.

Modernizing the grid means more than just replacing old equipment. Utilities must integrate new technologies, like smart meters, distributed generation systems (like rooftop solar panels), and advanced communication systems. These upgrades improve grid reliability and resilience but require significant planning and investment.

These challenges mean utility companies must think strategically about their investments and operations. They must also collaborate with technology providers, customers, and other stakeholders to develop and implement effective solutions.

THE BENEFITS OF TEMPORARY POWER SOLUTIONS

With the numerous challenges utilities face, they often need to rely on third parties to help during severe weather and times of crisis. Temporary power solutions provide



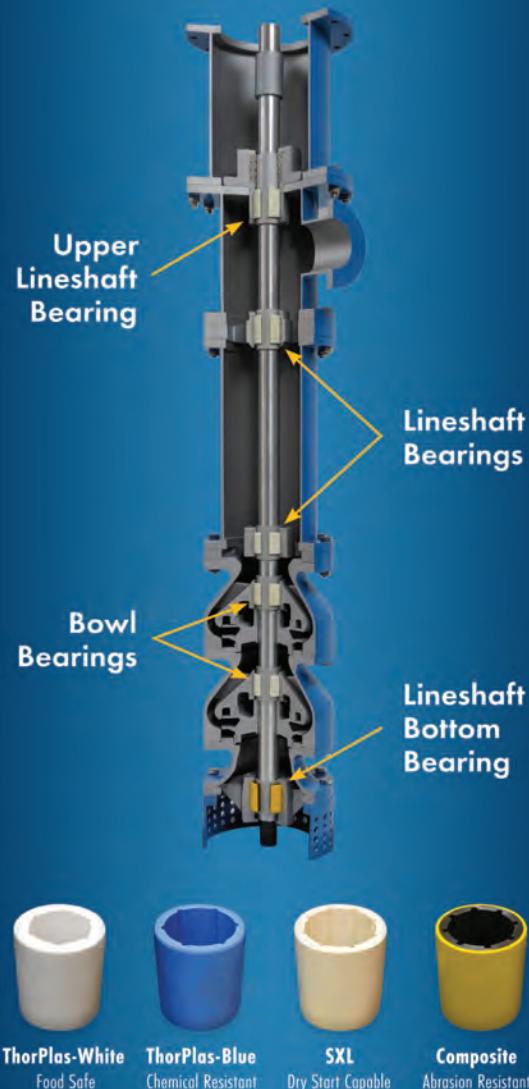
cost-effective, customized solutions to keep the power supply running for your customers. Plus, temporary power equipment supports a wide range of megawatts (MW) to generate as much or as little power as needed.

The right temporary power solutions company can provide valuable benefits to overcome the challenges of severe weather:

QUICK MOBILIZATION

Temporary power companies excel in their fast response to emergency situations, like power outages or equipment failures. Securing a trusted partner ensures rapid backup power deployment to minimize downtime and restore

LONG LASTING RELIABILITY WHERE IT'S NEEDED



Improved Reliability | Lower Operational Costs | Proven Performance

THORDON

www.ThordonBearings.com



power quickly. This all helps mitigate the impact on business operations and end-users.

UNINTERRUPTED, CONTINUOUS POWER SUPPLY

Temporary power bridges critical power gaps. It ensures businesses and homes have continuous supply and meets their expectations.

FUEL EFFICIENT, LOW EMISSIONS

Many temporary power solutions providers offer natural gas units equipped with advanced technologies, such as clean-burning engines, to minimize the carbon footprint and reduce environmental impact.

FLEXIBILITY

Temporary power solutions companies customize their solutions to meet each utility company's

specific requirements on a global scale. With various generator sizes, power capacities, and fuel options, these solutions scale and adapt to changing demand without significantly impacting infrastructure.

24/7 AVAILABILITY AND SUPPORT

These companies offer around-the-clock support with expert teams ready to address any technical issues, monitor power systems, and deploy technicians for maintenance as needed in real-time.

While the advantages of a temporary power supply company are significant, it's important to emphasize that they're only achievable through an experienced and qualified power solutions provider. Selecting a reputable provider is crucial to get the right service for your business.

A LOOK AHEAD: PREPARING FOR SEVERE WEATHER AND SUMMER PEAKING

It's no longer possible to put off planning for severe weather: it's only continuing to grow globally. With El Niño's return 2023, we have already seen new temperature records. Communities and utility companies need to prepare now to be ready for whatever comes.

Severe weather and summer peaking pose several threats to the utility market. For example, increased electricity usage for cooling purposes driving surges in demand, damage to utility infrastructure from hurricanes or tornadoes, brownouts or blackouts, and reputational risks if there is a sluggish response and power restoration can all spell trouble for utility companies. However, temporary power solution providers help to mitigate these risks.

In next month's conclusion to this series, we'll present the goals you should look for in choosing the right partner as well as some examples where utilities met these challenges head on. ■

Distributed Power Solutions (DPS) provides power generation rental solutions to meet the growing global demand for energy related products and services. DPS's turnkey rental solutions ensure you are prepared for your planned or emergency utility needs, 24/7/365. DPS is dedicated to the power generation business and has one of the largest equipment rental fleets of turbine and reciprocating engine generators available to meet demand. Our unmatched product support services include design, engineering, installation, and operation to help solve utility needs. DPS brings the expertise and focus of a specialty rental business to our customers to solve their temporary power generation needs. For more information, visit www.dpsenergy.com.

TUF-LOK® PIPE & TUBE COUPLINGS

- Self-aligning
- Self-grounding
- Stainless or mild steel
- Low cost
- Reusable
- Externally leakproof
- High pressure rated
- Full vacuum rated



Tuf-Lok International
Phone: +1 608.270.9478
Email: info@tulok.com • www.tulok.com

QUICK

Usually Ships In 1/2 The Lead Time
Vertical and Horizontal Pumps



513-530-0888

CRANE
PUMPS & SYSTEMS

BARNES
DEMING

envie³



Premium Efficient Non-Clog Pump Solution

WHERE
VERSATILITY
MEETS
PERFORMANCE

weftec
the water quality event™

BOOTH #2908



Whether you need a chopper, non-clog, submersible, dry pit, horizontal, or vertical pump, envie³ has you covered with a versatile portfolio that will solve all your needs.

offer.cranepumps.com/envie3-pumps

CHOOSING THE BEST ALTERNATIVES IN INDUSTRIAL ANALYTICS

A PI Server data visualization tools buyers guide Part 1 of 2

BY KEVIN JONES, DATAPARC

In late 2020, project managers in fields as diverse as oil and gas, chemical processing, food and beverage, and more, received news that OSIsoft would be retiring its ProcessBook software package, PI's venerable data visualization tool kit that debuted in 1994. Because of its tight integration with PI's industry-leading historian, ProcessBook was widely adopted by process engineers to build trends, dashboards, and process graphics from their PI Server time-series data.

Over the years, competitors have come up with newer, more powerful analytics tools, but many engineers have stuck with ProcessBook simply because of their familiarity with the tool kit, or because of the difficulty of migrating critical graphics and displays to a new platform. For those users who were comfortable with

ProcessBook, OSIsoft's announcement will challenge all users with finding a replacement.

While current users could continue to use ProcessBook indefinitely, by discontinuing support, OSIsoft is clearly encouraging customers to make plans to transition to alternative platforms. Security updates for ProcessBook ceased in 2022, and support for the platform will end entirely in December of 2024.

If you've been uncertain about replacing ProcessBook at your facility, now's the time to begin looking into alternative solutions. However, if you've been a devoted ProcessBook user, it may have been decades since your facility has shopped for an alternative industrial analytics tool. Below, we'll outline some of the key considerations as you start shopping for a replacement.

EVALUATING PI SERVER ANALYTICS TOOLS

Since ProcessBook's introduction, the industrial analytics marketplace has become quite crowded. There are dozens, maybe hundreds of companies out there making analytics products for everything from broad industrial applications to niche manufacturing processes. So where does one start in a search for an alternative to ProcessBook? What factors should be considered to determine which of these solutions is the best fit?

At a high level, you should be thinking about the following:



EASE OF INTEGRATION

Chances are, if you're using ProcessBook, you're also using PI Server as a data historian. If you're looking to replace

ProcessBook, the most critical question you'll have to answer is, "How well does this alternative integrate with PI server?" The answer to this question means the difference between a quick, ten-minute connection to PI Server, or a costly and time-intensive investment in custom development and new OT infrastructure.

Migration is also a key consideration. Your organization has invested time and money into building the ProcessBook displays essential to efficient operations. Certain ProcessBook alternatives provide tools to simply migrate existing ProcessBook displays to your new platform. Others do not.

2 DIAGNOSTIC ANALYTICS CAPABILITIES

Diagnostic or "exploratory" analytics tools are used for root cause investigation and troubleshooting of downtime events or product quality issues. Trends and trending capabilities are at the core of diagnostic analytics. Effective root cause analysis depends on rapid ad-hoc analysis and the ability to quickly overlay historical data from various process areas to determine correlation and causation.

Trending is likely to be one of the top two capabilities ProcessBook users are looking to address with a replacement system. In addition to trends, diagnostic analytics are often supported by other visualization tools, such as histograms, X/Y charts, and Pareto charts. When

presented with difficult process questions, the more ways you can slice and dice your data the easier it will be to arrive at the correct answer.



ITALIAN PREMIUM QUALITY WATER PUMPS SINCE 1974

PEDROLLO USA

45 Maryland Avenue East | St. Paul, MN 55117

Email: info@Pedrollo-USA.com | Phone: 877-PEDROLLO/877-733-7655 | Website: www.Pedrollo-USA.com

**3****OPERATIONS MANAGEMENT CAPABILITIES**

"Operations management" is broadly defined here as the capabilities that allow for:

- Production tracking
- Process monitoring
- OEE tracking
- Quality management
- Process alarms and notifications
- Reporting
- Manual data entry

That's a lot of functionality, and most of it comes from dashboarding and process graphics-building tools that leverage process data for real-time monitoring. Basic analytics solutions typically only allow for monitoring at the site level, but more sophisticated offerings allow enterprise-wide tracking of production KPIs across multiple sites.

ProcessBook users have gotten the most use mileage out of the platform's dynamic, interactive graphics, and it's not uncommon for displays built with ProcessBook to see a decade or more of continued use. When looking to replace ProcessBook's operations management capabilities, you have a few options. You could look for point

solutions designed specifically for that capability, like SSRS for reporting. You could find a highly customizable product that has coding capabilities like ProcessBook. Or you could find a broad solution that has the building blocks necessary to solve multiple business needs.

4**ADVANCED ANALYTICS CAPABILITIES**

Advanced analytics is another loaded term that we'll define here for the purpose of this post. Often used in relation to leading-edge manufacturing concepts, like machine learning and industrial AI, advanced analytics in ProcessBook replacement tools will typically take two forms: predictive analytics and prescriptive analytics.

Predictive analytics tools promise to prevent downtime and improve OEE by building models from recorded data to anticipate and alert users to potential productivity loss. Prescriptive analytics take the next logical step and tell you which actions need to be taken to address predicted production issues.

Together, and in conjunction with process automation tools, predictive and prescriptive analytics form a sort of elementary artificial intelligence used to maximize plant performance.

5**COST/PRICING**

Although it'd certainly be nice if it weren't the case, cost will likely be a consideration as you consider ProcessBook alternatives. Pricing for these solutions is usually determined by features and the scope of implementation, and most providers don't publicly list their pricing so providing even ballpark figures will be difficult. However, there's one key factor you should be aware of when evaluating pricing, the pricing model.

Pricing models vary between process manufacturing analytics providers, to include everything from flat rate pricing, usage-based pricing, tiered pricing, and user-based pricing. These days, many manufacturing analytics solutions use

"per-user" pricing, with the licensing cost going up according to the number of individuals using the tools at a facility. The upside with per-user pricing is that for small facilities, or for organizations with few people monitoring and analyzing process data, it can make for a relatively-cost effective solution. The flipside, obviously, is that for data-driven companies who believe in giving every operator, engineer, and SME the ability to contribute to improving plant performance, per-user pricing can get very expensive very fast.

A LOOK AHEAD

Next month, we'll wrap up this overview with point-by-point comparisons of different ProcessBook alternatives already on the market: dataPARC's own PARCview; OSIsoft's ProcessBook successor, PI Vision; GE's Proficy CSense; Canary's Axiom software; TrendMiner; Seeq; and Inductive Automation's popular SCADA platform, Ignition.

Any of the above applications could be the right choice for your needs, but identifying which aspects of industrial analysis these different tools emphasize will determine which specific choice is right for you. Asking the right question for your facility will determine the right answer. ■

KEVIN JONES serves as the director of sales and marketing for Capstone Technology's dataPARC division. Founded in 1997, dataPARC is a leading provider of industrial analytics and data visualization tools for process optimization and decision support. With a focus on serving the process industry, dataPARC offers historian and real-time analytics software for vertical markets such as oil and gas, pulp and paper, mining and minerals, food, chemicals and refining, and power and utilities around the globe. For more information, visit www.dataparc.com.

BLACOH™ FULL SYSTEM SOLUTIONS

Pulsation Dampeners · Diaphragm Seals · Valves · Calibration Columns · Injection Quills
Spill Prevention · Transient Monitoring · Surge Vessels



With the most expansive product offering in the marketplace and backed by our team of engineers and application experts, Blacoh offers full system solutions to improve fluid process system performance, reliability, safety and productivity.

Find us at
WEFTEC!

September 30 - October 4
Booth 954



BLACOH™
INDUSTRIES

Blacoh.com
Sales@Blacoh.com
951.342.3100



BREATHING NEW LIFE INTO OLDER PUMPS

Combining OEM knowledge, legacy doesn't mean end of life

BY HECTOR CASTILLO, AARON BURTON, AND MITCHELL LEGG, SULZER

There are many pumps that have been performing vital operations for decades. Solidly built and offering reliable service, in some cases long after the manufacturer has gone by the wayside. However, there comes a time when even the most stoic of equipment needs to be refurbished, if only to improve performance and efficiency back to the original specifications.

Of course, the worst-case scenario of a catastrophic pump failure can be amplified if the original equipment manufacturer (OEM) is no longer in business; operators can feel

in a difficult position. Sourcing a new pump can, depending on the application, have a long lead-time and high investment requirement. In addition, the new pump will most often have a different design, which will necessitate significant alterations to the surrounding infrastructure.

AN EFFECTIVE SOLUTION

Sulzer's alternative is its OEM-X Line service, which offers pump engineering expertise that has both the design capabilities and the manufacturing technology to refurbish an original pump from any brand. This approach has several

benefits, not least the opportunity to incorporate modern materials into the original pump, which can be reinstalled quickly and returned to normal operation. This is usually the most cost-effective solution, keeping downtime to a minimum and can, in some cases, even lead to efficiency gains.

As a pump OEM, Sulzer has developed cutting-edge design and manufacturing techniques that can also be applied to the maintenance and repair of equipment from any manufacturer, including those that are no longer in the market. This service is exemplified by a recent project that

went through the company's service center in Pasadena, Texas.

The pump in question was a between-bearing, six-stage type working with propylene carbonate. The failure happened when the rotating assembly spun contrary to its designed direction for a considerable period of time, leaving behind damage to all the stationary and rotating elements contained in the pump.

DESIGN COMPLEXITY IS NO OBJECT

The design of the pump was a mix of an axially split and double casing barrel, containing both an outer shell and diffuser stages; the outer case didn't suffer any damage from the failure. The cost of a newly designed current API edition pump was prohibitive due to the requirements to change the foundations and existing piping configurations.

Initial investigations found many diffuser guiding vanes bent or broken, as well as diffuser walls that

had cracks and wear damage due to the contact with the impellers to the point where they could not be repaired. There was substantial damage to all internal parts as well as rubbing marks present on all elements. Most of the wear rings had become stuck between the stationary and rotating elements or were worn out of shape altogether. Some stationary rings were absent from their locations and several impeller walls were cracked or broken and couldn't be used again.

The challenge for Sulzer was to recreate all of the damaged internal components, maintain the hydraulic design from the third-party OEM and upgrade various aspects with the latest advances in technology.

REVERSE ENGINEERING

The first step was for the design engineering team to reverse engineer the complex items, such as impellers, and diffuser passageways, using 3D laser scanning. This can render



The pump in question was a between-bearing, six-stage type working with propylene carbonate, with damage to all the stationary and rotating elements contained within.

a component's geometry with an accuracy of 0.0005 inches, allowing the design engineer to capture an accurate, digital mesh of the part.

The mesh enables complex measurements and sketch geometry details to be obtained. A solid 3D CAD model was then translated into a 2D sketch to perform the quality audit (QA) and control processes on the scanned parts. Once the QA process was complete, the parts manufacturing department



PERFORMANCE, ENGINEERED.

We understand the critical importance of safety standards and regular maintenance.

Leverage our experience as an OEM with services designed to exceed industry standards regardless of brand, ensuring your operations run smoothly and safely.

- Mechanical Equipment Management
- Operational Parts Management
- Workshop & Field Service
- Reliability & Availability
- Engineered Solutions



trilliumflow.com/pumpservices



The Sulzer pump service center in Pasadena redesigned and created the remaining components needed for the repair.

was tasked with producing the components by translating the model into a CAD-appropriate file to create molds and patterns for casting. These were machined according to the final specifications and dimensions requested by the repair engineer and returned to the service center.

Working in parallel with the parts manufacturing department, the pump service center in Pasadena redesigned and created the remaining components needed for the repair. These were less complex and consisted mainly of sleeves, wear parts, shafts, and rings. The parts were redesigned using 3D CAD software and manufactured according to specifications derived from Sulzer's expertise as a pump OEM.

MATERIAL UPDATES

In addition, the customer requested an upgrade to the pump's wear elements to a high-temperature, high-friction-resistant polyimide thermoplastic material. This technology has been used in aerospace applications for many decades and has been adapted to centrifugal pumps to achieve better results while preserving the component's lifespan.

These high-performing polyimide thermoplastics allow the pump to run at tighter clearances than metallic wear elements, resulting in less internal recirculation and increased pump performance. The modifications were discussed with the engineering and repair engineering departments

for approval to ensure all parties and the customer were agreed.

Once all parts were received, they underwent a preassembly process to allow the technicians to verify the fit and design of the new components. Finally, the pump was assembled and hydraulically pressurized to 1.5 times maximum allowable working pressure (MAWP) to ensure no leak paths were present and overlooked during the repair, before the pump was prepared for shipment back to the customer.

The result of all this effort was the restoration of a complex, third-party pump to its full capabilities with the same if not better performance than before, using the latest technology and materials. The other positive outcome for the customer was the capability of Sulzer's OEM-X Line service to fully support the pump in the future, thanks to all the completed engineering work. Going forward, the equipment's service life will continue, even though its original manufacturer is no longer present in the market. ■

HECTOR CASTILLO is field engineer, **AARON BURTON**

is engineering manager, and

MICHAEL LEGG is design engineer for Sulzer Pumps Service Inc. Sulzer is a global leader in fluid engineering. We specialize in pumping, agitation, mixing, separation and application technologies for fluids of all types. The Flow Equipment division specializes in pumping solutions specifically engineered for the processes of our customers. We provide pumps, agitators, compressors, grinders, screens and filters developed through intensive research and development in fluid dynamics and advanced materials. We are a market leader in pumping solutions for water, oil and gas, power, chemicals and most industrial segments. www.sulzer.com

SEEPEX.

An Ingersoll Rand Business

CONVEY DEWATERED CAKE AND SLUDGE EFFICIENTLY.



BTHE RANGE PUMP

VISIT US AT WEFTEC!
BOOTH# 737

SEEPEX open hopper pumps and systems are designed for use with common dewatering and storage devices on the market. These pumps allow for high solids pumping over long distances in a fully enclosed system without odor nuisance or pollution.

Various options are available to monitor pump speed, hopper media level, stator temperature, discharge pressure and a number of other functions. These optional controls and sensors run autonomously, but are also capable of connecting with plant operation systems (SCADA).

SEEPEX Inc.

An Ingersoll Rand Business
sales.us@seepex.com
T +1 937 864-7150
www.seepex.com



Contact us today and learn how we can help you optimize your processes and lower energy costs.

WEFTEC CHICAGO BOOTH 3600



BJM Pumps®



DERAGGER®



OverWatch®

www.flowsolutions.com



INDUSTRIAL
FLOW
SOLUTIONS™

MUELLER

VISIT US AT
WEFTEC
BOOTH #2306

Gate Valve, Meet Tapping Sleeve. The Perfect Couple.

Introducing PermaSeal™ Insertion Valve

Reduce water service shutdown,
disruption to flow and water contamination.

The PermaSeal Insertion Valve integrates the functionality and performance of the Mueller A-2361 Resilient Wedge Gate Valve with the Mueller H-600 Series Ductile Iron Tapping Sleeve to allow for insertion into existing water mains with minimal service disruption and dependable functional service life.



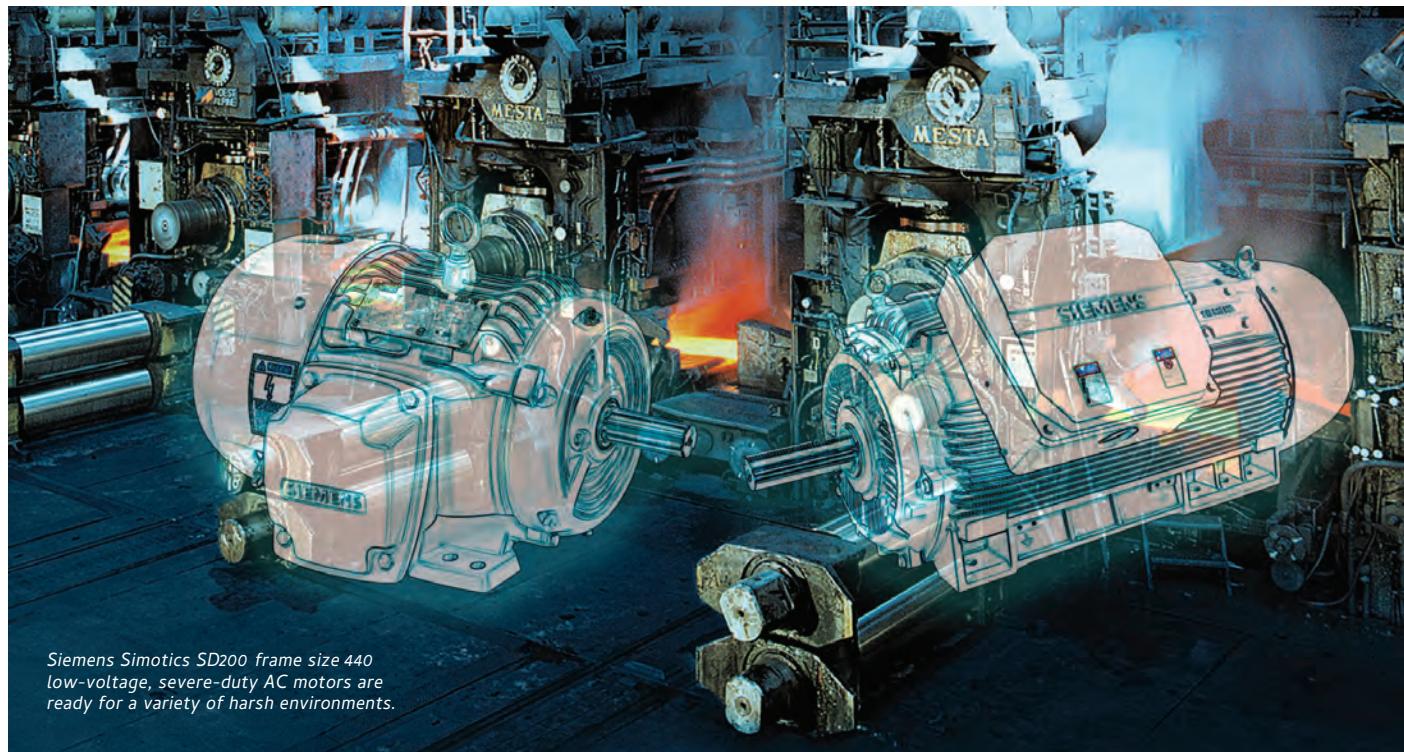
Ready to learn more?

Scan the QR code to get started.



MUELLER® | ECHOLOGICS® | HYDRO GATE® | HYDRO-GUARD® | HYMAX® | i2O® | JONES® | KRAUSZ® | MI.NET® | MILLIKEN® | PRATT® | PRATT INDUSTRIAL® | SENTRYX® | SINGER® | U.S. PIPE VALVE & HYDRANT

Copyright © 2023 Mueller Water Products, Inc. All Rights Reserved. The trademarks, logos and service marks displayed in this document herein are the property of Mueller Water Products, Inc., its affiliates or other third parties.



EXCEEDING NEMA PREMIUM EFFICIENCY STANDARDS

Cast-iron motors bring new efficiency to harsh environments

BY JOHN MEYER, SIEMENS

When it comes to power, whether it's the oil and gas market, petrochemicals, grain or rock product, food and beverage, or near countless other harsh environments, efficiency is everything. The Simotics SD200 440 low-voltage, severe-duty AC motors, which now provide a range from 75 to 800 horsepower output, are ready for the challenge—meeting or exceeding NEMA Premium® MG1 Table 12-12 efficiencies.

MEETING TOUGH CONDITIONS

Providing high productivity and energy-efficient operation in all

torque ranges, these cast-iron NEMA motors are built to power pumps, fans, compressors, hoists, winders, and similar equipment in harsh environments. The motors feature 444-5013 cast-iron frames for operation in 460V and 575V ranges. A wide selection of options is offered, including IP56 ingress protection, encoders, brakes, and blowers plus others to suit the applications presented.

On these motors, the frame, end-shields, fan guard, and easy-access, diagonally split, oversized terminal box are all cast-iron. Complementing this construction are zinc-plated

hardware, epoxy paint, and stainless-steel nameplates for long life and easy identification in the field. A unique offset rotor bar provides improved efficiency, while larger bars and end rings reduce resistance. Each die-cast aluminum rotor assembly is dynamically balanced for extended bearing life and includes a high-strength C1045 carbon steel shaft for maximum performance. Premium C5-grade steel laminations and copper magnet wire are standard.

FACING THE HEAT

For insulation, the Class-H non-hygroscopic system with NEMA Class

B temperature rise provides an extra margin of thermal life. The insulation system meets or exceeds NEMA MG1 2014 Part 31, making these motors suitable for variable speed drives in constant torque (4:1) and variable torque (20:1). All windings are tested for Corona Inception Voltage (CIV). The Siemens product manager for low-voltage NEMA motors, Oscar Palafox, explains, "One of the features of the SD200 is its flexibility in the field, as the motor can be switched from F1 to F2 and F3 orientation with ease. Plus, the safety features on this new line are unmatched by competition. Full H-Class conformity provides winding protection, while the swivel hooks are a significant improvement over eyehooks for handling of these heavy units. In addition, the unique Siemens composite insulation on the SD200 is a cost-saver over the ceramic bearing alternative with ten times the resistance of other solutions in the market."

GOING THE DISTANCE

Even with tough conditions in mind, Siemens backs the SD200 with a three-year warranty.

"Finally, the NEMA Premium efficiency is a guarantee of long performance life with very tight deviation of losses. Shaft current remains more consistent for better uptime," Palafox adds. He further notes this line affords users Division II, Class 1 (gas) and Class 2 (dust) protection. ■



Simotics SD200 motors are designed for use in oil and gas, petrochemical, grain, rock product, food and beverage, and other markets with Division II, Class 1 and 2 conditions present.

Siemens USA has been a national asset moving America forward for more than 160 years, investing three billion dollars in the U.S. market, strengthening its technology portfolio and manufacturing footprint. The company's technology supports the critical infrastructure and vital industries forming the backbone of America's economy. With customers in all fifty states and Puerto Rico, Siemens USA employees and suppliers are creating more agile and productive factories, more intelligent and resilient buildings and power systems, and more reliable and sustainable transportation. For more information, visit www.usa.siemens.com/simotics-sd200.



Johnston Pump
A Sulzer Brand



Think Vertical Think Johnston

A leader in the municipal water industry, irrigation, and flood control.

Products built with quality, not only as a core design feature but a brand identity. With NSF certification, an array of standard features, and the ability to be extensively customized, no wonder it's been the vertical pump brand of choice for over 100 years.

SULZER

www.sulzer.com
www.johnstonpump.com

HOLDING IT ALL TOGETHER

An overview of EP31 high-strength resin applications

BY DR. WALTER BRENNER, MASTER BOND



Master Bond EP31 is a two-component epoxy-based resin that is primarily designed for bonding applications. As with our other epoxy-based adhesives, it features high strength after curing. As shown by the case studies below, this compound can bond a variety of dissimilar substrate pairs, including aluminum-acrylic and Kevlar-polyimide. The three case studies below provide illustrative examples of EP31 used to bond components of aeronautical wings (piezoelectric actuators), biological apparatuses (DNA amplification), and thermocouple housings.

CASE 1: PIEZOELECTRIC MICROFIBER COMPOSITE ACTUATORS FOR MORPHING WINGS

Morphing wings are desired in aircraft applications due to their advantages compared with fixed wings, including being able to responsively adapt to aerodynamic drag. Researchers from California

State University at San Bernardino have developed two approaches for obtaining control surfaces (aerodynamic devices that allow pilots to adjust the flight attitude of an aircraft) on morphing wings using microfiber composite (MFC) actuators. The authors explored the effectiveness of using two bonding approaches: a flap approach in which the MFC actuator was bonded to each side of a metal substrate and a direct bonding approach in which MFC actuators were directly bonded to the Kevlar wing using Master Bond EP31.

For the direct bonding approach, the authors bonded the MFC actuator as close to the trailing edge as possible while simultaneously avoiding knotted areas in the air bladder of the wing. The actuator was bonded to the airfoil using Master Bond EP31. According to the authors, EP31 was chosen because of its high shear strength of 20 kN, which helped reduce compliance problems that would have otherwise reduced

the actuator's performance. After cleaning the surface of the actuator and the airfoil with acetone, the adhesive was cured for twenty-eight hours at room temperature.

The bonding reliability was assessed by repeatedly applying sinusoidal voltage signals to the actuator over a frequency range of less than 1 Hz to greater than 1 kHz. After visually inspecting the bond, the authors found no visible signs of debonding. Furthermore, when using the direct bonding approach, the authors conducted bonding reliability tests for several days and successfully reproduced their experimental results several times. The authors noted that greater 90 percent of the actuator formed a strong bond with the wing, and this bonding percentage could be further increased by increasing the temperature during bonding.

After successfully bonding the MFC actuators to the wings, the authors compared the two bonding approaches. Their results showed that, although the flap approach

produced greater displacements, it also made the wing less flexible. By directly bonding the MFC actuator to a metal substrate and then attaching it to the trailing edge of the wing (similar to traditional wing flaps), the authors were able to maintain the flexibility of the wing but observed problems with tension loading at higher wing pressures. As noted by the authors, EP31 played a key role in ensuring the reliability of the direct bonding approach.

CASE 2: MOLECULAR DIAGNOSTICS IN A TEACUP

Salmonella enterica is responsible for more than half of all food-borne illnesses worldwide. In the United States, food safety is ensured by testing for the presence of *Salmonella* by shipping samples to dedicated laboratories, which involves the use of expensive instrumentation. Researchers at the University of Hawaii at Manoa have developed a novel method based on loop-mediated isothermal amplification (LAMP) that does not require the use of such instruments to detect the presence of *Salmonella* DNA in milk. As part of this approach, Master Bond EP31 was used to bond the cylinders that housed the phase change material (PCM) that was responsible for maintaining the reaction temperature of the device.

To detect the presence of *Salmonella* DNA in samples, the authors' DNA amplification device needed to maintain a constant reaction temperature for at least thirty minutes

to ensure reaction completion. The continuous reactions were heated by adding a small volume of boiling water, and the temperature was maintained for ninety minutes due to the use of a PCM that was housed in an aluminum shell with acrylic caps. Master Bond EP31 was used to fit these pieces together by overnight curing, and then the temperature within the device was measured by using three thermocouples fixed with the epoxy.

The custom-made device successfully maintained the target temperature even longer than was necessary. The authors showed that the fluorescence signal of their custom fluorimeter had comparable performance to real-time PCR. Master Bond's EP31 played a key role in ensuring that the PCM did not leak from its enclosure, helping the device maintain the temperature required to run the *Salmonella* DNA amplification reactions.

This approach provides a simple approach for detecting *Salmonella*, especially for developing countries that seek an inexpensive alternative to instrument-based methods due to unreliable electricity grids.

CASE 3: HEAT EXTRACTION FROM POROUS MEDIA BY MEANS OF CARBON DIOXIDE APPLICATION

Geothermal energy systems attempt to extract thermal energy in locations where sub-optimal geological conditions are present. Part of this process involves

More than a Check valve *It's a Check-All®*

SILENT OPERATION!
Our check valves close quickly and smoothly to avoid water hammer noise and vibration.

UPSTREAM TRIM!
The upstream trim is protected from corrosive media mixing; thereby, extending valve service life.

SPRING-LOADED!
Multiple spring settings as well as seat and body materials available to meet your application needs.

And most lead times are less than one week. That's what makes our check valves Check-All®.

Order online at : www.checkall.com
Call us at: 515-224-2301 or
email us at: sales@checkall.com

 
Proudly manufactured in the USA

reservoir stimulation to overcome the lack of porosity/permeability of the rock using either physical or chemical processes with the use of a heat-transfer process fluid. Supercritical carbon dioxide can be used as the working fluid due to its lower viscosity and greater density difference between the cold and hot fluids used in this process.

Researchers at the University of California, Berkeley performed a variety of experimental and numerical investigations to determine the performance of supercritical carbon dioxide to extract heat from porous rock for geothermal applications. Due to the sparsity of academic literature on how best to construct a lab-scale supercritical carbon dioxide flow system, the authors took it upon themselves to construct an apparatus to continuously flow temperature-controlled supercritical carbon dioxide under controlled conditions into a pressure vessel.

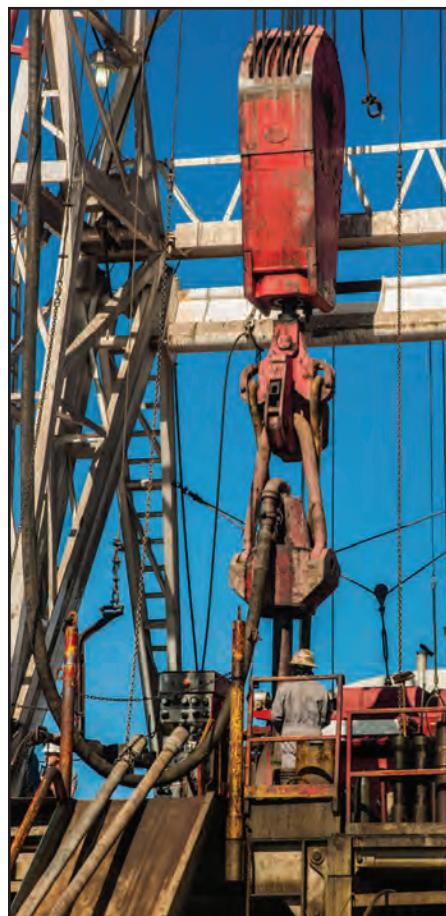
They measured the temperature of this vessel at twenty-three locations within the sample using thermocouples. Master Bond EP31 was critical to ensuring that the thermocouples measured the temperature without leaking supercritical carbon dioxide.

The authors inserted twenty-three thermocouples from the bottom of the vessel through two stainless steel pipes that were sealed using EP31. To optimize the bonding, the authors internally threaded the stainless-steel pipes and then cleaned them before assembly. Once the thermocouples were inserted and properly adjusted, a compression fitting cap was attached to one end of the pipes to allow the thermocouples to pass through. The pipes were filled with EP31, and the entire apparatus was vacuumed to remove air bubbles.

The developed apparatus provided data that may be useful for validating carbon-dioxide-based

porous media flow models for field scale geothermal applications. When working with supercritical carbon dioxide, effusion of the gas is a major concern, especially at higher temperatures and pressures. The authors investigated a variety of material combinations to obtain seals that prevented carbon dioxide leaks.

After a trial-and-error approach, the authors finally used Master Bond EP31 to seal the thermocouples into their stainless-steel housing. Without threading and cleaning, the authors noted that insufficient bonding was obtained, further highlighting the importance of thoroughly cleaning the bonding surfaces before applying and curing EP31. The authors noted that EP31 remained intact and maintained a seal throughout the duration of their experiments, preventing the leakage of supercritical carbon dioxide during experiments. ■



RELIABLE POWER

When your engine package powers your business, you need a reliable source of power that you can depend on under the harshest of conditions. That's why we use John Deere PowerTech™ engines which are durable, fuel efficient, and easy to maintain. They are also backed by one of the strongest engine and equipment companies in the World.

At engines, inc., we engineer solutions for pump packages for a variety of industries, including: water/wastewater; chemical; oil/gas; and mining. We stand behind our packages with the most reliable support structure in the business. Our skilled staff is always available to you on our 24-Hour Service Line to give you the support you need, when you need it, wherever you are. We are your power source.



24-HOUR SERVICE LINE

870-268-3799

Jonesboro, AR | 800-562-8049 | www.enginespower.com

DR. WALTER BRENNER is technical director of Master Bond. Dr. Brenner received his Ph.D. in polymer chemistry from Brooklyn Polytechnical Institute. He is a renowned professor of chemical engineering and has served as a consultant for various U.S. government agencies. He holds numerous patents and is credited with being the first person to develop electron beam radiation curing. Master Bond Inc. was founded in 1975. Our focus has been on developing the best in epoxies, silicones, polyurethanes, polysulfides, UV cures, and other specialty adhesive systems. We are true specialists in our field and are recognized by many as the preeminent adhesive formulation company in the world. Through research and development, we have been able to create innovative, new compounds with truly unique properties. For more information, visit www.masterbond.com.



Portable Gas Detectors You Can Count On

gascliptech.com +1.972.775.7577 1.877.525.0808



Durable. Affordable. Reliable.

At Gas Clip Technologies, we believe that quality and budget-friendly should go hand-in-hand, which is why we create top-of-the-line gas detection solutions that have a low cost of ownership. Each detector is compliance-based and designed to withstand the roughest treatment in the harshest environments.

All of our products are available through distributors worldwide.

UPCOMING EVENTS:



Booth
#617

nsc Safety
Congress & Expo

New Orleans, LA 2023
Professional Development Seminars Oct. 20-22 and 25-26
Congress & Expo Oct. 23-25

Booth
#1219

A+A
24. - 27. OKTOBER 2023
DÜSSELDORF, GERMANY

Booth
#4D12



FEATURED PRODUCT

VAUGHAN

THE VAUGHAN CONDITIONING PUMP™: A BEAST JUST BELOW THE SURFACE

When you are making plans for the 2023 WEFTEC, be sure to include watching this year's Operations Challenge where the Vaughan Conditioning Pump™ will be on full display.

American-made and built to last, the Vaughan Conditioning Pump™ is a Vaughan Submersible Chopper Pump mounted on a portable stand and fitted with high-velocity mixing nozzle. The Conditioning Pump recirculates the contents of the wet well, chopping and mixing to produce a homogeneous mixture that is easily pumped out.

Floating mats are removed and solids that have accumulated on the floor are re-suspended. As the pump is mounted on a portable stand it can easily be used in multiple applications at a single jobsite, facility, or municipality.

WHY CHOOSE VAUGHAN CONDITIONING PUMP?

BUDGET SAVER

When Vaughan created the Conditioning Pump, they designed it to be used in several different scenarios to save you from costly clean out cycles and maintenance. Here are a few examples:

LESS VACUUM TRUCK VISITS

By re-suspending and removing floating solids that have accumulated on the floor, the Vaughan

Conditioning Pump™ reduces—and in most cases eliminates—the need for costly vacuum trucks, saving thousands of dollars each year.

HELP EXISTING "NON-CLOG" PUMPS FROM CLOGGING

If the large pumps you are currently using in the station (wet well or dry well) are clogging on solid filled liquid they are trying to pump, it can be a costly endeavor to replace the pumps. Some pumps can cost you upward of \$350,000 to replace. Vaughan created the Conditioning Pump to solve this problem at a fraction of the cost. You can put the conditioning pump into the wet well and chew up all of the rags and solids so that the existing pump will not get clogged.

REDUCE UNNECESSARY 3RD-PARTY CLEANING CYCLES

Lift stations/collection pits tend to form floating mats that standard lift station pumps cannot pump out. If left unattended, the layer will continue to thicken until you eventually need to call in a vacuum truck to suck off the thick layer. This results in thousands of dollars in maintenance and dumping fees. The Vaughan Conditioning Pump™ can get rid of unnecessary third-party cleaning cycles and the unwanted costs that come along with them, by recirculating/conditioning the pit until the mat disappears.



CIRCULATE "SETTLING LAYER" OFF YOUR WET WELL OR SUMP

When solids fall out of suspension, they create a "settling layer" at the bottom of the tank, resulting in costly third-party cleanout cycles. The Vaughan Conditioning Pump™ resuspends these solids so the duty pumps can actually pump out and remove the solids, and also save you from those costly clean out cycles. ■

VISIT VAUGHAN COMPANY AT THE 2023 WEFTEC IN CHICAGO

TO SEE THE VAUGHAN CONDITIONING PUMP,
ALONG WITH THE OTHER PUMPS ON DISPLAY VISIT

BOOTHS S-1412 AND N-6831

AGC CHEMICALS AMERICAS

FORBLUE FLEMION ION-EXCHANGE MEMBRANE

Forblue Flemion, a fluorinated ion-exchange membrane, is used in salt electrolysis plants to produce caustic soda and chlorine by the electrolysis of salt water and plays an important role in the production of caustic soda, chlorine, hydrogen, and other various chemicals that support people's lives. AGC launched its ion-exchange membranes in 1975, and since has supplied them to more than fifty countries worldwide. Forblue Flemion F-9060 contains a new polymer, which was developed using AGC's specialized polymer production technology. For more information, visit www.agcchem.com.



DYNAPAR

HS35iQ WITH PULSEIQ TECHNOLOGY

Dynapar launches the HS35iQ Encoder with PulseIQ Technology, a new programmable hollow shaft encoder. The HS35iQ Encoder with PulseIQ Technology is a self-diagnosing feedback device with color-coded LEDs and digital output. This device offers a new way for OEM and end-users in heavy-duty machine applications to troubleshoot faulty encoders with access to encoder health status in real-time. Specific fault indications prevent unnecessary downtime and recommended corrective action help users confidently address the root cause in as few steps as possible. For more information, visit www.dynapar.com.

AUTOMATIONDIRECT

CRIMPING TOOL

AutomationDirect adds more wire and cable cutting, stripping, and crimping tools to serve your application needs. Our new crimping tool additions include a fixed crimping tool with indent profile, more tools with oval and trapezoid crimp profiles, a crimper model with a color-coded connector reference, and a new square profile rotatable self-adjusting crimping tool. The pistol grip automatic cutting/stripping tool provides stress-free operation. For more information, visit www.automationdirect.com/wire-strip-crimp-tools.



COVAL

VACUUM GRIPPERS WITH COMMUNICATIONS INTERFACE

Coval's new generation of vacuum grippers now incorporate the latest CMS HD series of vacuum pumps. These pumps have a heavy-duty design for high reliability even in harsh environments (IP65), capable of ensuring fifty million cycles. A factor of the pump's longevity is their modular design, which allows specific configurations and targeted maintenance of specific parts to optimize repairability. As a result, the new generation of CMS HD multistage pumps adds to the vacuum grippers' reliability and adaptability. For more information, visit www.coval.com.



TURBOMACHINERY &
PUMP SYMPOSIA

BRINGING EDUCATION AND INDUSTRY TOGETHER.

SHORT COURSES: SEPTEMBER 25, 2023

SYMPOSIA: SEPTEMBER 26 – 28, 2023

GEORGE R. BROWN CONVENTION CENTER • HOUSTON, TX

The Turbomachinery & Pump Symposia is recognized worldwide as the industry's must-attend event. Connect with more than 4,750 delegates, meet with leading suppliers, observe product demos, and get answers to your technical questions. We look forward to seeing you in Houston!



4,750

ATTENDEES



365

EXHIBITING COMPANIES



45

COUNTRIES



TPS.TAMU.EDU

#TPS2023

HOSTED BY

TEXAS A&M
UNIVERSITY

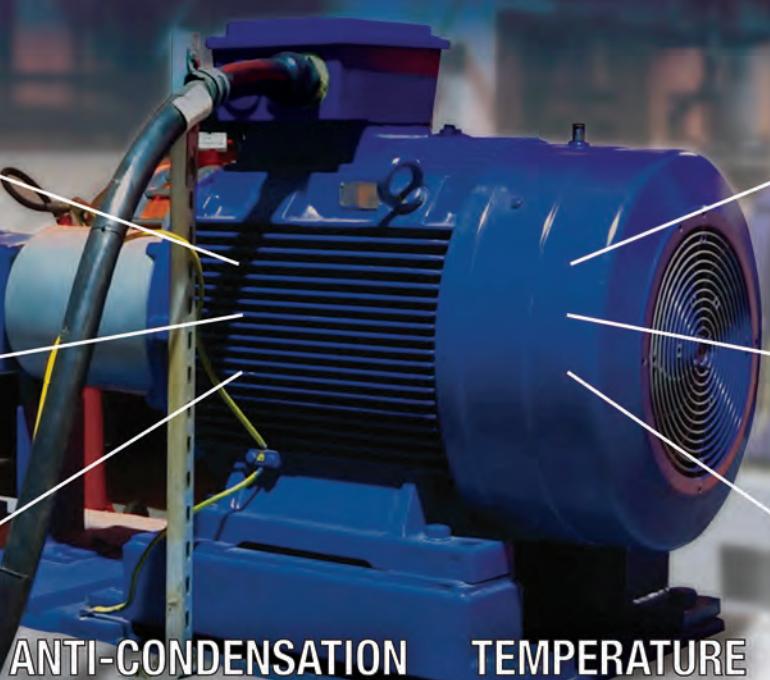
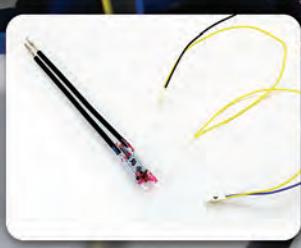
TEES

TURBOMACHINERY LABORATORY
TEXAS A&M ENGINEERING EXPERIMENT STATION

MOTOR TEMPERATURE SENSORS

RTDs Thermocouples Thermistors Thermostats

FOR STATORS



FOR BEARINGS



MOD-TRONIC

www.RewindSensors.com

1-800-794-5883

THE SUN SHINES FOR EVERYONE

Unique partnership expands solar energy into low-income areas

Last month, Australia's Allume Energy announced a \$1.5 million bridge investment from Elemental Excelerator and the Schmidt Family Foundation to bring its SolShare rooftop solar technology to more than 4,000 residents across the Southeastern United States, starting with shared solar projects in Florida, Georgia, and Mississippi. Below, Allume CEO and co-founder Cameron Knox and Elemental Excelerator founder and CEO Dawn Lippert explain why this partnership is prioritizing this funding to ensure low-income communities living in multi-unit buildings can benefit from shared solar in the Southeast.

MPT: *Why is it important to bring solar energy access into lower income areas?*

CAMERON KNOX: Until recently, solar technology has primarily been saving money for people who already have it. We need to ensure we include everyone in the energy transition. On average, beneficiaries of the SolShare technology can save up to 40 percent off their electricity bills. The first U.S. pilot project in Orlando has indicated an average annual savings of \$1,166 per apartment in the first year of operation, including net metering credit savings. This partnership will ensure low-income communities can benefit from clean, affordable energy from the sun.

MPT: *How expansive can this project get?*

CAMERON KNOX: We expect new projects across the Sun Belt over the next year will prevent over 10,000 tons of carbon emissions (equivalent to taking over 2,000 cars off the road for a year) that would have otherwise been created from conventional energy consumption. Allume will soon begin installation of its second project in Orlando, bringing the number of U.S. installations to three, with the other site in Jackson, Mississippi.

Back in Australia, Allume is already providing around 2,000 apartments with clean affordable energy, with around half of those in social or affordable housing. By bringing SolShare to the U.S. market, Allume is helping reduce the income gap that has plagued the American solar energy market.



Cameron Knox



Dawn Lippert

MPT: *How did Allume find partners to bring its technology to America?*

CAMERON KNOX: Solar installations can be 30 to 40 times more prevalent among single-family homes than apartments, echoing a profound lack of solar energy availability among lower-income families. Allume's ability to close this gap, as it has already demonstrated in Jackson, Mississippi, and Orlando, Florida, drew investment interest from Elemental Excelerator and the Schmidt Family Foundation.

DAWN LIPPERT: Elemental Excelerator originally invested in Allume Energy because they are leaders in bringing affordable solar to affordable housing. We could all use an extra \$1,000 a year in our pocketbooks rather than spent on electricity bills. We are now thrilled to collaborate with others in funding Allume's expansion in the sunny Southeast. Solar electricity is cheaper and cleaner than fossil fuels, and it is time that we all have access to it.

The partnership of Allume, Elemental Excelerator, and the Schmidt Family Foundation will not only benefit the environment and tenants' bottom lines, but it also will expand the market for clean energy in communities that are often overlooked, setting the stage for still more climate and economic benefits.

MPT: *What benefits do you think these residents and the area utilities will see over time?*

CAMERON KNOX: Allume Energy remedies one of the oldest and most vexing issues in green energy: installing solar panels on multi-family homes. SolShare is a behind-the-meter technology that takes solar energy generated by rooftop panels and allocates it to each grid meter as desired. ■

To listen to an extended version of this interview, be sure to subscribe to MPT's podcast, *The Efficiency Point*.



Another Vanton AdVantage

Great Hands-On Support Behind Every Pump

Visit our display at WEFTEC in booth 1841



VANTON PUMP

Over the past 70 years, VANTON has always been about more than just the pump. We work hard to build strong customer relations with every pump we manufacture. In good years and bad we stand behind our pumps with a global network of dealer/distributors dedicated to providing sales and service expertise for all of our thermoplastic products.

Wherever you're located you'll find experienced VANTON representatives have got you covered. Whether you need guidance on pump selection, or aftermarket in-the-field service, you can be confident that a VANTON tech team member is close by.

If you're already in a relationship with VANTON, allow us take this opportunity to thank you. If not, why not find out how reassuring it can be having your pumping needs covered with VANTON in your corner.

VANTON PUMP...
building lasting relationships one pump at a time.



Sump-Gard®
Vertical Centrifugal
Pumps



Chem-Gard®
Horizontal Centrifugal
Pumps



Pump/Tank
Systems



Flex-I-Liner®
Rotary Peristaltic
Pumps

VANTON
PUMP & EQUIPMENT CORPORATION

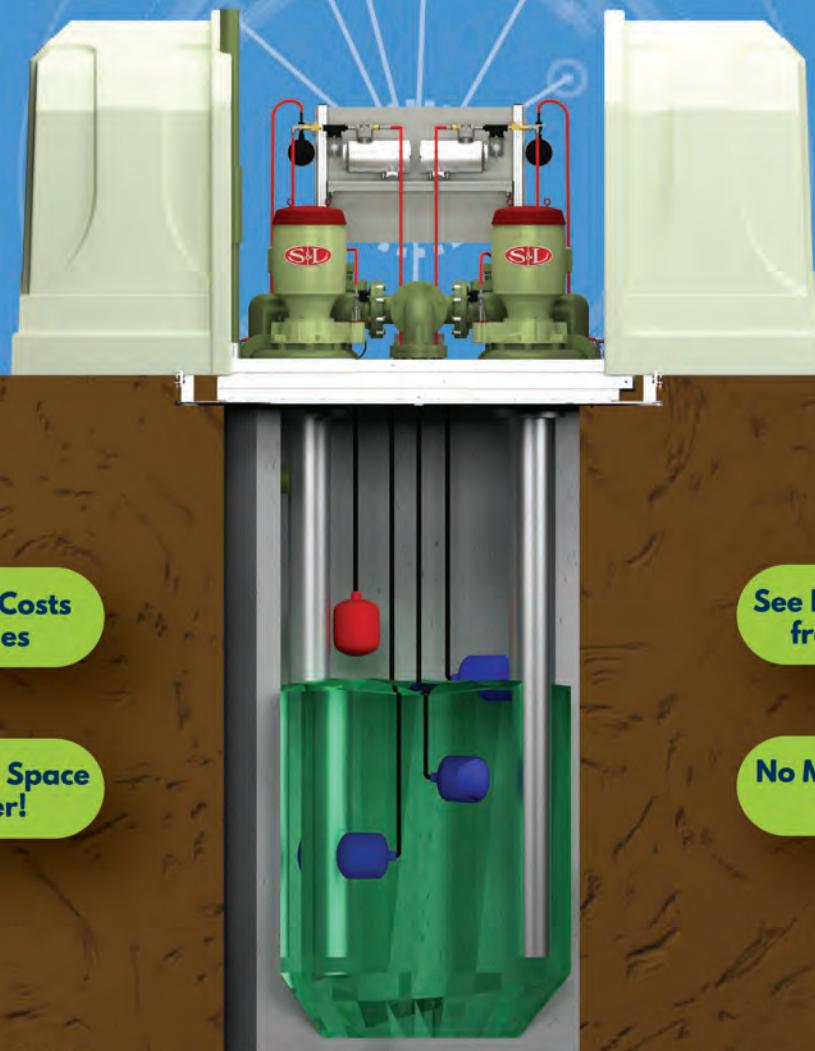
vanton.com

GO ABOVE.

Go Above the Wet Well with the #1 Pump Station for O&M Ease and Safety, Pump Longevity, and Lowest Life-Cycle Costs



Wet Well Mounted Pump Stations



Save 56% Lower Costs
vs. Submersibles

Eliminate Confined Space
Hassles Forever!

See How to Easily Switch
from Submersibles!

No More Pump Clogging
with XPELLER®

weftec
the water quality event™

SEE THE BETTER WAY
TO PUMP AT WEFTEC.
S&L BOOTH #3431



Smith & Loveless Inc.

Protecting Water. Protecting People.™

[VISIT SmithandLoveless.com]

[CALL 800.898.9122]