Written by Amanda Martyka, Assistant Editor
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5 Steps To Reduce Your Water Footprint

More than 90% of the world's fresh water is consumed in the agricultural and industrial sectors. Given this staggering number, their carbon footprint is not the only thing manufacturers should consider to achieve a sustainable future — *it is important that manufacturers also identify solutions that will reduce their water footprint and increase efficiencies*
. As such, Siemens recommends the following five easy tips for factory and manufacturing facility owners and operators to reduce their water footprint and start reaping the savings.

1. Do your homework. Annually review your water management strategy from intake to discharge. Where it makes sense, take steps to reduce your water footprint. Ask for expert advice. There are technologies available that offer sustainable solutions for manufacturers and communities alike to treat water to virtually any specification. By doing an audit, you can identify ways to reduce your water footprint immediately. Be sure to continue to monitor your usage closely. This Website explains how a corporation can look at their water footprint.

2. Treat water as a valuable resource. Treated water isn't free; it takes energy and technological resources to treat it. Statistics show that by 2030 almost 50% of the world's population will be living in areas of high water stress. So, the more tightly managed the water usage, the better.

3. Reuse and recycle. Capturing, treating and recycling water during the manufacturing process can reduce water use by millions of gallons per year, as well as save money. This can be achieved by looking at areas like your boiler feed water, utility water or, in the example of a major beverage manufacturer, water used in packaging preparation. The manufacturer was able

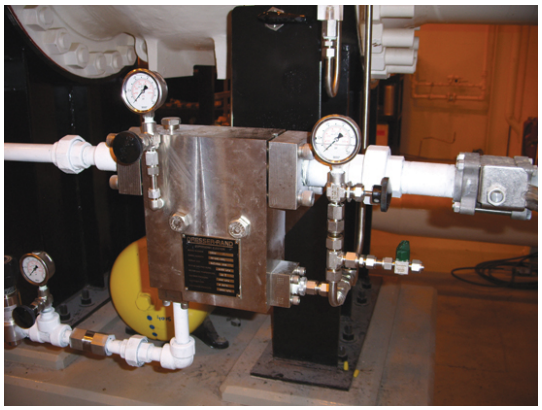
to put new processes in place to recapture and treat the water used for bottle washing, ultimately saving 25,000 gallons of water a day!

4. Reduce waste. An effective water management strategy can help reduce waste and discharge, while also helping to meet regulatory requirements. Even taking a closer look at wastewater and identifying other uses within the facility can result in great savings. For example, a major healthcare products manufacturer recovered its waste stream and reused its feedwater, enabling it to recover more than 52 million gallons of water per year!

5. Consider the water/energy link. Energy costs account for nearly 30% of the operational costs at water treatment facilities. Technology advancements, such as better automation, reuse technologies and waste-to-energy technologies, can mean greater energy efficiencies. A major brewing company installed technology, which, by converting its waste to energy, was able to save the equivalent of $500,000 in energy costs per year at a single location. So, don't just look at the water use, follow the electricity usage as well.
For more information from Siemens on reducing your water footprint, visit here.

Siemens Water Technologies
Warrendale, PA.

For more info, enter 30 at www.LMTfreeinfo.com



New Technology Offers A Breath Of Fresh Air

A new compressor technology from Dresser-Rand employs supersonic ejectors that, by reclaiming gases ordinarily vented into the atmosphere, offer environmental benefits and enable facilities to operate more efficiently. The tandem or two-stage ejector system captures gas leakage from a dry-gas seal at low pressure and recompresses it to a pressure equivalent to the fuel gas pressure. Reclaiming these gases by injecting them into gas turbine fuel systems reduces hydrocarbon emissions to the atmosphere. The ejectors are available as new equipment options and product upgrades for centrifugal compressors that compress hydrocarbon gases. They also work with any low-pressure, low-flow-rate vent streams, and high-pressure stream applications. Because the ejectors have no moving parts, seals, shafts or packing, they are practically maintenance free compared to mechanical compressors and vacuum pumps.

Dresser-Rand Group Inc.
Houston, TX

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Greenhouse Gas Monitoring

ABB has announced upgrade solutions for the Advance Optima AO2000 Series Continuous Gas Analyzers (CGA). This expands monitoring capability to include CO2 greenhouse gas emissions measurement to address expected US EPA environmental compliance requirements. These regulations will impact reporting requirements for cement kilns, nitric acid plants, power generation, incinerators, refineries and petrochemical plants. ABB continuous gas analyzers accurately measure emissions at very low levels to establish, maintain and prove compliance. Built for reliability, ease of maintenance, sensitivity and flexibility, these analyzers are engineered to work with the plant's specific stream compositions and within designated measurement ranges. A full range of upgrade options are available to meet site- and application-specific requirements. Upgrade options for non-ABB analyzers are available upon request. Installation and commissioning services for all upgrades can be implemented on-site by ABB factory-certified service engineers.

ABB
Houston, TX

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Gearbox Oil Receives Wind Turbine Approval

ExxonMobil recently announced that its Mobilgear SHC XMP 320 has received approval for second-fill applications in Winergy gearboxes featured in GE 1.5 MW turbines. The gearbox oil received this approval from Winergy, a manufacturer of wind turbine gear units, based on the product's performance during more than 30 rigorous industry tests that mimic up-tower conditions for turbines' gears, bearings, seals, filters and surface coatings. This approval confirms that Winergy has recognized that the Mobilgear oil can be used in its wind turbine gearboxes. The gearbox oil has also passed second-fill approvals to be used in Bosch-Rexroth and Moventas gearboxes used in GE 1.5 MW turbines that are under warranty. ExxonMobil worked with both Winergy and GE Wind Energy to develop qualified refill and conversion procedures for employing Mobilgear SHC XMP 320. Currently used in more than 25,000 wind turbines worldwide, Mobilgear SHC XMP 320 is a high-performance synthetic gearbox oil that delivers exceptional oxidation resistance, a naturally high viscosity index and excellent low temperature fluidity that, according to the company, helps to extend lubricant life and equipment reliability. In addition, Mobilgear SHC XMP 320 contains a proprietary additive system designed to provide protection against conventional wear modes like scuffing and micropitting. This performance attribute can help lead to less wear on critical parts and translate into cost savings. By contributing to reduced unscheduled downtime, lower maintenance costs and extended oil life, ExxonMobil's lubricants can help wind turbines generate more energy.

ExxonMobil
Fairfax, VA

For more info, enter 33 at www.LMTfreeinfo.com

Balancing Program Keeps The Blades Turning

LUDECA has expanded its VIBXPERT Balancer and Analyzer to suit the wind industry and its balancing challenges. This new, built-in wind balancing program has been adapted to the slow rotational speeds of wind turbines, helping to improve the balance conditions and, according to the company, result in a significant increase in the uptime and availability. With its balancing program, combined with software, accelerometers linear to 0.1 Hz, speed sensor and balance grade tolerance chart (G16), the VIBXPERT is an ideal portable system for mass unbalance of wind turbine rotor blades.

LUDECA, INC.
Doral, FL

For more info, enter 34 at www.LMTfreeinfo.com

Energy Management eLearning

C oastal Training Technologies and DuPont Safety Resources have collaborated to produce a new training program titled Energy Smart. Available on DVD, this is the first course in Coastal's upcoming DuPont Energy Management eLearning Series. Energy Smart helps promote general energy awareness and includes energy-saving tips that translate into real savings for an organization. It aims to change the misconception that energy is "just there" and encourages employees to treat energy costs with the same fiscal assertiveness as any other business expense. Content contributions by DuPont energy engineers and consultants are based on DuPont's successful energy management experience that has resulted in $3 billion in cumulative energy savings since 1990. The new offering applies a three-pronged approach to energy management and presents a compelling business case for its adoption. It explains the impact of energy management on the economy, environment, customer interface, energy independence and emerging technologies. It also shows how every employee can improve energy efficiency, citing low-cost, easy-to-implement best practices of energy-efficient organizations. Energy Smart is the first of 16 courses in this soon-to-be-released eLearning Series. Coming this fall, these online courses cover the energy-efficient use of industrial equipment and systems. Titles include: *Energy Management Best Practices, Energy System Instrumentation and Controls, Theory of Steam Generation, Fuels and the Combustion Process, Boilers and Auxiliaries and Emission Control and Ash Handling,*
among others.

Coastal Training Technologies
Virginia Beach, VA

For more info, enter 35 at www.LMTfreeinfo.com

Energy-Efficient Pumping

ITT's Bell & Gossett Technologic® 502 variable speed pump controller utilizes the latest generation hardware platform with advanced pumping software and proven algorithms to create a smarter, more cost-efficient and energy-saving pump system for HVAC and pressure booster applications. The 502 integrated pump controller and adjustable frequency drive offers features that increase ease of set-up and menu navigation, lengthen equipment life and lower operating costs, including:

- Control of up to four parallel pumps
- Four analog inputs for a combination of zone sensors, flow sensors and suction sensors
- Customized algorithms to handle the entire range of pumping applications
- Program safeguards against damaging hydraulic conditions
- Local and remote start/stop capability
- RS-485 Communications
- Plain English diagnostic display with soft-touch keypad switches

Designed to provide equipment payback in 1-3 years, the Technologic 502 reduces its environmental impact via efficiency and water conservation. It contributes to LEED certification and also may qualify for economic stimulus rebate or local utility incentives.

Bell & Gossett
a brand of ITT Corporation
Morton Grove, IL

For more info, enter 36 at www.LMTfreeinfo.com