



THE END POINT

Volume 2, Issue 1

Premier Water & Energy Technology, Inc.

May 2006

Message from the President

Water and Energy Conservation

Tom Brandvold
President

Greetings!

Warmer weather always seems to lead to questions about Evaporative Salts and Legionella. In this edition of The End Point, we have updates on Premier's initiatives in these areas. Our ES² system is on its way to obtaining a U.S. Patent and for the first time, we have begun to offer Legionella Management Plans for owners and operators of Evaporative Cooling Systems. Your Water Treatment Consultant can provide you with more information on these topics as the need arises.

Looking ahead, rising energy and water costs are becoming a fact of life. As operators of water cooled equipment it is more important than ever to maintain clean heat exchanger surfaces. Increasing cycles of concentration through effective pretreatment, optimizing bleed or blowdown with automatic control equipment, and having the correct treatment technology in place are critical parts of any energy/water conservation effort.



One of the trends we are seeing is the increased applicability of Reverse Osmosis as a feedwater treatment option. Once the exclusive domain of Water Softeners, R.O. based feedwater allows for greater cycles of concentration and significant reductions in

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Congratulations!

Achievements

Premier is proud to announce two of our Water Treatment Consultants, Steve Suzanne and Kevin Gajewski have passed the exam to become Certified Water Technologists. This prestigious accomplishment is similar to passing the Bar or CPA exam for a Water Treater. There are only a few hundred people in the country who have been awarded this certification. Congratulations Steve and Kevin! 🎉

Promotions

Rod Kenny, one of our most experienced Water Treatment Consultants has recently been promoted to Senior Water Treatment Consultant. In his new role, Rod will be available as a technical resource for our Field Service Personnel in helping to maintain and execute the best Water Treatment Programs for our customers. Join us in congratulating Rod the next time you see him. 🎉

Welcome Bobbie Joe!

Please welcome Bobbie Castillo, who is the newest member to our Business Development Group. Bobbie will be helping us with marketing activities in specialized areas. You may be hearing from her soon regarding some new products and services we have developed. Bobbie is currently attending school at UNF and is pursuing her Bachelors degree in Health Sciences. She hails from Thomasville, Georgia and is a veteran of the Air Force. She was last stationed at Travis Air Force Base in California where she was an Air Traffic Controller. She enjoyed the many challenges military life offered up on a daily basis.

Today, Bobbie is settled in Jacksonville with her mini Schnauzer named Rusty. She enjoys outdoor activities, is a fan of all types of sports, and is threatening to take up golf.

Welcome aboard, Bobbie. 🎉

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Edited By: Tracy Staples


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blowdown. The corresponding energy savings more than pays for the operation of the R.O. unit. While not a fit everywhere, we would be happy to evaluate your boiler system for this technology to see if there is a reasonable return on investment.

Another way to dramatically reduce fuel cost is to control boiler Total Dissolved Solids in as narrow a range as possible. Wild fluctuations in conductivity are a tell tale sign of excessive blowdown. This extra blowdown wastes fuel and water. The way to correct this is to automate your blowdown using an online conductivity monitor and a motorized ball valve. A system like this measures conductivity continuously and only opens the blowdown valve when the conductivity is above the setpoint. It has generally been shown that a controller like this pays for itself in a matter of months.

As for cooling systems, an unreliable controller will keep you from operating at the maximum possible cycles of concentration. Remember, any unnecessary water loss from your system carries with it the treatment cost as well as water and sewer charges if applicable. A modern controller will keep the bleed off from your tower to a minimum. In fact, most of today's control equipment has the ability to keep conductivity in a band +/- 2% of the setpoint. If you are seeing swings in tower conductivity 200-500 mmhos below your set point, you are losing valuable treated water.

Thank you for the privilege of being your Water Treatment Partner. Anytime there is something more you think we might be able to help you with, please ask.

Have a great summer! 

ES²

Evaporative Salt Elimination System

Product Engineering Group

With the advent of higher efficiency media and fill, evaporative salts have become an ever increasing concern in cooling tower operations. Evaporative salts form any where you have intermittently wet and dry conditions. In cooling towers, droplets of recirculating water will splash onto the outer portions of the fill. The water droplets will dry or evaporate, but the minerals that were in the water are left behind and begin to build up. Over time, this buildup can grow to the point it will affect tower performance, media integrity, and even the potential for microbiological contamination.

The mechanism of evaporative salt formation can also be readily observed when you wash a car and don't

towel dry it. Left to dry in the sun, mineral spots will form just like the minerals build up on cooling tower media.


When this problem begins to develop, the only thing you can do is manually clean the fill with a pressure washer. Sometimes, the evaporative salts build up to the point the fill must be treated chemically to soften the deposit AND be pressure washed. In either scenario, significant man hours are required.

In response to this problem, the Premier Water & Energy Technology engineering group has developed **ES²** (Evaporative Salt Elimination System).

This system employs a pump and control panel that circulates condenser water through a series of spray nozzles focused on the outside surfaces of the fill. This spray serves to keep the fill wet with treated condenser water and prevent the accumulation of evaporative salts.




Figure 1

If you would like more information about **ES²**, please contact your Water Treatment Consultant. 

Coming Soon!

GE on GSA

Tracy Staples
Online Administrator

As we continue to expand our relationship with *GE Water & Process Technologies*, we are now able to sell GE products under our GSA Federal Supply Schedule. We are in the process of adding these products to our list. GSA customers will soon have an even wider array of quality products to choose from for their Water Treatment Programs. If you would like more information about this, please ask your Water Treatment Consultant or call our office at 800-741-0984 and ask for Melissa. 

Legionella

Do You Have a Management Plan?

Tracy Staples
Administrative Support Manager

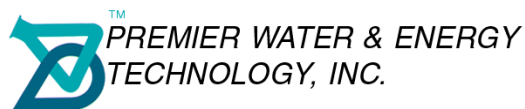
Legionella is the name given to a bacterium that occurs in most warm water environments. Legionella has been detected in cooling towers and evaporative condensers, although it can also be found in grocery store misters, whirlpools, fountains, spas, etc. If inhaled or aspirated, this bacteria can cause Legionnaires' Disease especially in those people who have suppressed immune systems or respiratory illness. Legionnaires' Disease is an acute bacterial infection of the lower respiratory tract that can be potentially fatal.

In response to growing marketplace concerns, Premier Water & Energy Technology, Inc., can now help you develop a Legionella Management Plan. In the future, owners and operators of evaporative cooling systems will be required to have a plan in place that provides for proactive testing and monitoring for Legionella bacteria. The plan will also have an eradication procedure in response to a positive test result. Protocols such as this are already required in Canada and parts of Europe.

The Premier Legionella Management Plan will consist of the following:

- A customized, site specific, plan that will outline a risk assessment at your facility, a risk management plan, and protocols for elimination if an outbreak happens at your facility.
- An Owner/Manager Training Program that will outline the effects that a Legionella breakout could have at your facility and the importance of a well documented plan.
- An Operator Training program that will include general information on Legionella as well as outline best practices for maintaining and cleaning the process water systems at your facility to decrease the risk of Legionella infection.

To get more information on this plan, please contact Bobbie Castillo at 904-268-1152 or you can email her your questions at bcastillo@premierwater.com. ☞



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Trivia Question

Congratulations to our November Trivia Winner!

The prize was a Digital DVD Recorder/Player. Thank you to all of you who responded. Good luck this month!

Website Trivia:

Browse through our website to find the answer to this question:

How many pounds of steam does one Boiler Horsepower produce?

Fax your answer for Website Trivia to 904-268-6851, or you can email your response to tstaples@premierwater.com. All responses received by June 15th will be entered in a drawing to win a prize. Be sure to include Your Name, Company, Phone Number, and an answer to the question. Please reference May Trivia Question on your fax.

Answer to November's Trivia Question:

Name one of the 10 Commandments of Cooling Systems. You could have answered with any of the following:

1. Maintain Proper Cycles of Concentration and Saturation Indices.
2. Maintain Proper Treatment (Inhibitor & Biocide).
3. Keep Feed & Control Equipment Set Properly, Operating and Calibrated.
4. Passivate. Keep Distribution Decks Covered. Maintain Equal Water Distribution.
5. Know Make-Up Water Characteristics. Make Proper Product Selections.
6. Know Operating Characteristics of Equipment (Chillers, AHU & Towers).
7. Keep Tower Basin Clean. Maintain Proper Water Level.
8. Record Equipment operating Temperature/Pressures and Pump & Controller Settings.
9. Report Scaling/Corrosive Conditions. Review Daily Logs - Evaluate Trends.
10. Have full knowledge of communication with, and, training of, operating, supervisory and management personnel. ☞