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# Be Ready with Corrosion Inhibitor Water Treatments for Seasonal Changes!

The seasons are changing once again. In the Northern Hemisphere, that means it is time for comfort cooling systems to shut down and for boilers to fire up. In the Southern Hemisphere, the opposite is true, with cooling systems coming online and boilers facing seasonal layup. Whatever the time of year, corrosion is always a threat, prompting facility owners and water treatment service providers to discover the best



protective solution for the seasonal change. Cortec® offers the following recommendations.

# **Cooling System Shutdown in the Northern Hemisphere**

As comfort cooling systems in the Northern Hemisphere are turned off for the season, there are three basic layup options: 1) Do nothing and hope for the best, 2) Perform a wet layup with Cortec<sup>®</sup> VpCI<sup>®</sup> Technology, or 3) Perform a dry layup with Cortec<sup>®</sup> VpCI<sup>®</sup> Technology. In the first case, corrosion clogging and eventual

leakage and shortened service life are often the short- and long-term results. The latter two strategies add Vapor phase Corrosion Inhibitors to the equation to create a protective molecular layer on all enclosed metal surfaces within the cooling water system. Application is easy, with corrosion protection and, by extension, longer service life and less downtime as the results.

#### Wet and Dry Layup Options for Cooling Water Systems



Wet layup options include the <u>Closed Loop Toad<sup>TM</sup></u> (for closed loop water treatment), the <u>Cooling Loop Gator</u><sup>®</sup> (for open loops), <u>S-69</u>, and <u>VpCI<sup>®</sup>-649</u>. If desired, any of these water treatments can be subsequently drained after 12-24 hours of application to implement a dry layup. The Cooling Tower Frog<sup>®</sup> is a pure dry layup option that should be applied after the system has been shut down and drained. The advantages of each are comprehensive

corrosion protection (reaching all internal surfaces, below and above the water level) and easy startup because of minimized corrosion and no product removal required.

#### Returning Boilers to Service

Another consideration at this season is the return to service of boilers used for facility heating. When bringing boilers back online, it is important to remember the higher risk of oxygen pitting while the normal chemical operating program is not yet in place. Adding a <u>Boiler Egg<sup>™</sup></u> to the boiler at this critical phase is a great way to scavenge oxygen and passivate metal during the initial filling of makeup water that is not pre-heated. The



Boiler  $\text{Egg}^{\text{TM}}$  comes in an easy-to-handle pouch that is readily dissolved upon water contact, releasing the active ingredients into the water and protecting the boiler against oxygen pitting as it is being filled.

#### Turning Down the Heat in the Southern Hemisphere

For HVAC service providers in the Southern Hemisphere, the focus is reversed. With the coming of spring and the promise of summer on its way, now is the time to start shutting down heat-producing boilers and to start bringing comfort cooling water systems online. For best results next fall and winter, the following seasonal layup strategies are recommended to protect against boiler corrosion in the meantime.

# Dry Layup of Boilers



Cortec's line of boiler layup "animals" are effective and easy to use. Products such as the <u>Boiler Gecko<sup>TM</sup></u>, <u>Boiler Lizard<sup>®</sup></u>, and <u>Boiler</u> <u>Dragon<sup>TM</sup></u> are designed for dry layup. Their Vapor phase Corrosion Inhibitors diffuse throughout the boiler void space and form a protective molecular layer on metal surfaces within. They outshine traditional methods of layup such as desiccant, dehumidification, and nitrogen blanketing because

Cortec<sup>®</sup> boiler corrosion inhibitors do not require an airtight seal and typically do not need to be removed before boiler startup. Furthermore, Cortec<sup>®</sup> layup technologies are safer and more cost-effective than nitrogen blanketing.

Another excellent strategy at boiler layup time is to add a Boiler  $Egg^{TM}$  in preparation for the boiler's return to service next season. The Boiler  $Egg^{TM}$  remains dormant until makeup water is added, at which time the Boiler  $Egg^{TM}$  protects against the higher risk of oxygen pitting mentioned previously.

# Wet Layup of Boilers

Wet and wet-dry layup options also exist for those who need to leave their boilers full or want to avoid opening their boilers for product application. The <u>Boiler Iguana<sup>TM</sup></u> is specifically designed for corrosion protection of boilers on standby (up to  $250 \degree F [121 \degree C]$ ) and is an outstanding alternative to maintaining high pH and regularly testing oxygen scavenger levels. The <u>Boiler Salamander<sup>TM</sup></u> is designed for wet layup of high-purity steam boilers.



The <u>Boiler Turtle<sup>M</sup></u> is a wet-dry layup option in which corrosion inhibitors are added to the system at high water level and are either left for the entire layup season or drained after 12-24 hours for a dry layup without opening the system. All three wet layup options include corrosion protection in the vapor-phase to protect metals from corrosion above the water level.

# Evaluate Last Season's Cooling System Layup



As personnel bring cooling systems online south of the equator, now is also a good time to evaluate the current layup process and look for signs of corrosion that may signal the need for a different cooling water inhibitor. If so, the Cooling Loop Gator<sup>®</sup> and Closed Loop Toad<sup>TM</sup> are convenient and effective tools to ensure a better layup next season.

### Be Ready for the Seasonal Change

Seasonal change comes faster than many would like. For boiler and cooling loop owners, operators, and water treatment service providers, that means it is important to adopt an economical and effective seasonal layup procedure now that will avoid downtime and extend service life in the long run. Contact Cortec<sup>®</sup> today to discuss the seasonal change in your hemisphere and find the appropriate solution to address it:

https://www.cortecwatertreatment.com/contact-us/

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