

# APEX

QUARTERLY

FIRST QUARTER 2020

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**NEWS ON SAFE  
CHEMICAL SOLUTIONS  
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PRODUCTS CORPORATION**



**UPDATE: 23MAR2020**

Dear Customers and Clients,

We want to assure you that we take the health and well-being of our community, customers, and associates very seriously. Like you, we're closely monitoring the quickly developing effects of the Coronavirus (COVID-19) pandemic.

Apex Engineering Products Corporation has a responsibility to all our stakeholders and shall remain operational, as permitted, during regularly scheduled hours to ensure that consumers which rely on our products for their scheduled maintenance, critical procedures and immediate requirements continue to have access to them. We have a diverse range of clients and we want to ensure all of them, especially those in essential industries, are able to remain fully operational.

Apex production schedules will continue to operate with elevated sanitation, quality, and safety programs. Inventory levels are ample and we have no concerns in our supply chain to foreshadow potential delays. To prevent further spread of the virus, Apex staff and representatives worldwide are advised to avoid close contact with customers and colleagues. All sales literature, presentations and product data are available digitally. All visitations at Apex have been suspended including customers and partners as well as all staff meetings subsequent to last week's safety meeting. Our technical support and customer service personnel will remain available for any questions and will continue to fulfill orders without hindrance or delay. Please utilize our website, phone (630-820-8888), fax (630-820-8886) or email [info@apexengineeringproducts.com](mailto:info@apexengineeringproducts.com).

We are all in this together. We will continue to monitor the COVID-19 situation and will follow guidance from public health officials and government agencies, so we can continue to support our customers and communities as needed. We will proactively communicate with our customers should concerns develop and will advise on the actions to be taken.

For more information about COVID-19 and what you can do to keep healthy and safe, visit the Centers for Disease Control at [cdc.gov](http://cdc.gov) or your local health department's website.

Stay healthy and be well,

E. Michael Ostermeier  
President  
Apex Engineering Products Corporation

## RYDLYME Descaler | Cooling Tower Energy Savings

The basic principal of a cooling tower is to cool the water that has picked up heat generated by equipment within and around a facility.

The operation begins in the basin where water is pumped out to the facility. As that equipment is cooled, the water picks up heat and returns to the top of the cooling tower. The relatively warm water is distributed onto a hot deck or through spray nozzles that evenly distribute it over the tower fill media. (See figure 1).

The tower fill media is designed to increase surface area, as well as contact time between air and water. This enhances evaporation and allows further cooling of the tower water. The water then falls collects in the tower basin where the circulation loop begins again.

Water scale within a cooling tower can restrict the water distribution of spray nozzles, reduce the water flow through the openings of a hot deck and restrict the air flow within the tower fill media. All of these conditions will result in diminished cooling capacity and inefficient operation of the associated equipment on the cooling tower system. Not to mention that the additional weight of water scale can ultimately cause collapse of the cooling tower.

Neglecting cooling towers as well as other water operated equipment could not only increase the chance for bacteria growth, but will cost more money in the long run versus cleaning the equipment with **RYDLYME**. Achieving a 3°F reduction of cooling tower leaving water temperature can save approximately \$16,000 a year! (See figure 2). In this scenario, the payback period for using **RYDLYME** is less than 3 months!

A cooling tower system can be cleaned by adding **RYDLYME** to the tower basin, thus allowing the tower's pump to circulate the solution throughout the tower and the equipment it is cooling. This can be accommodated during the normal operation of the cooling tower without shutdown! It is imperative when calculating the required amount of **RYDLYME** needed for a cooling tower system to include enough **RYDLYME** for both the tower and the load.

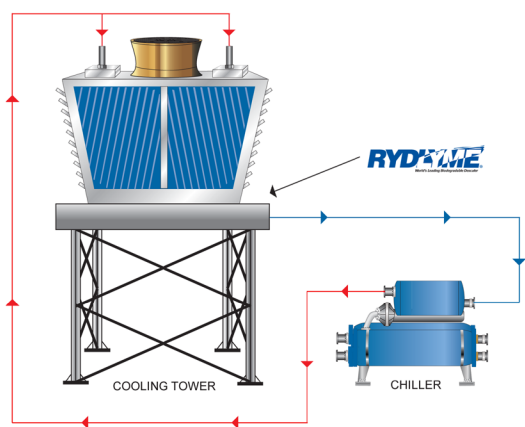
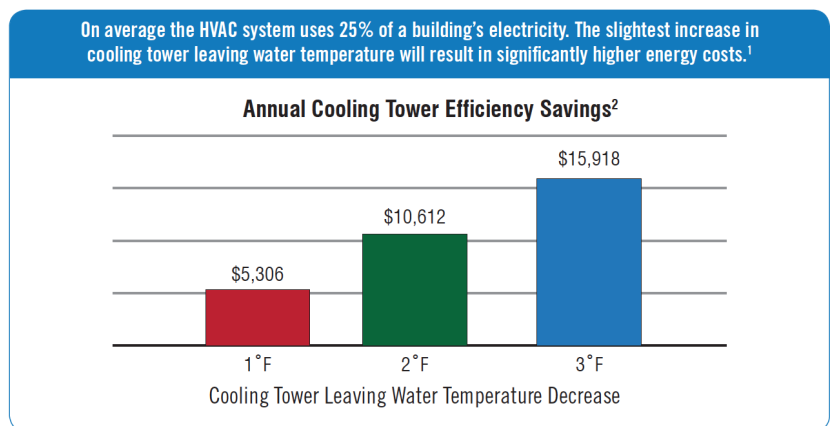


Figure 1 - Cooling Circuit



<sup>1</sup> Note 1: U.S. Energy Information Administration (EIA)  
<sup>2</sup> Note 2: Savings are based on the energy costs for a 500 ton centrifugal chiller, 0.68 kW/ton chiller efficiency at full load, \$0.12/kWh energy cost, \$25/kW per month, 80% ratchet demand charge, and 2,000 equivalent full load hours of operation.

Figure 2 - Baltimore Aircoil Company

## REGIONAL MEDICAL CENTER

A local hospital was having issues keeping their operating rooms at an adequate temperature for doctors and patients. The source of the problem was water scale deposits which had accumulated within the condenser tubes of one of the wing's dedicated chillers. It had been operating without issue throughout the spring months, but once temperatures began to increase the 1,200 ton unit began struggling. A team of service personnel were brought in to clean the tubes in order to prevent the issue escalating to critical. The unit had to be shut down and the condenser was opened to mechanically brush inside of the tubes and remove the scale deposits.

Although successful at reducing its condition from near critical, brushing did not remove all of the scale deposits from the chillers enhanced tubes. Those that remained would cause similar effects of that of arterial plaque and the tubes would be susceptible to further scale accumulation at an increased rate. At this point, the condenser water change in temperature (leaving water temperature - entering water temperature) had only achieved 4.5°F  $\Delta T$  out of the OEM design of 10°F  $\Delta T$ .

The remaining scale deposits were trapped in the enhancements of the condenser tubes. Safe, biodegradable **RYDLYME** descaler was circulated at a low concentration to remove the scale deposits quickly, easily and completely. The **RYDLYME** cleaning was performed within 7 hours and the unit brought back to life. The condenser was opened once more after cleaning for a final, validated inspection. Condenser water  $\Delta T$  after **RYDLYME** was able to achieve OEM design specifications of 10°F  $\Delta T$ . The cost of **RYDLYME** was recuperated in less than three weeks of operation as the total energy savings for the year was more than \$75,000!



### CHALLENGE

A 1200 ton chiller system unable to keep up with the summer heat within a large medical center.

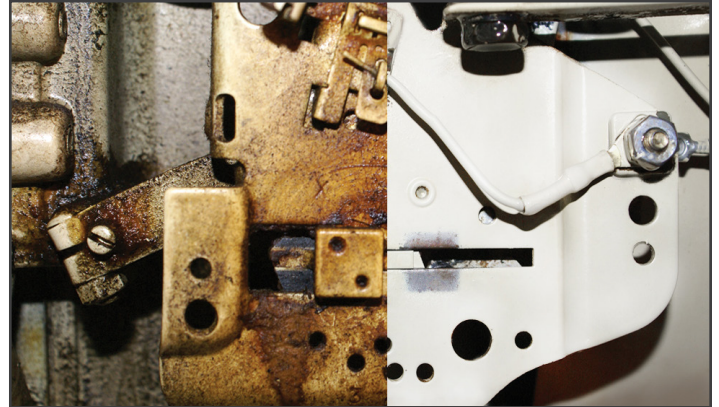
### SOLUTION

After mechanical brushing failed to achieve complete tube cleaning, 300 gallons of **RYDLYME** was circulated for 7 hours.

### RESULTS

Condenser water  $\Delta T$  was restored to OEM design specifications and tubes were verified to be completely free of scale deposits. Over \$75,000 in annual energy savings!

# SPRING START-UPS FOR HVAC AROUND THE CORNER



Despite the massive shutdowns that are crippling much of the world's economy, it is not too early to start planning for start-up season. While **RYDLYME** is the ideal product for cleaning chillers, cooling towers and more, we have exceptional biodegradable products for other vital HVAC components.

**RYDALL CC Coil Cleaner** safely and effectively cleans air-cooled condensers, permanent air filters, evaporator coils, window units and any other finned cooling/heating coils or equipment. It can be applied **INDOORS** or **OUTDOORS** as a non-foaming spray or through a foaming applicator to penetrate deep into the coil beds eliminating the need to carry multiple products to successfully complete a job. **RYDALL CC** is also safe on rubber membranes including roofing material!

**RYDALL MP Multi Purpose Degreaser** is a biodegradable, medium-duty surface degreaser/cleaner that quickly and safely removes oil, grease, grime, dirt and other contaminants from all surface types and components. **RYDALL MP** completely rinses off pollutants **WITHOUT** leaving behind a greasy film.

If you are in HVAC and would like to learn more about **RYDALL CC** and **RYDALL MP**, as well as **RYDLYME**, contact us [HERE](#) or call **800.451.6291** or **630.820.8888**.

# THE HVAC TRIFECTA



## DESCALER & PUMPING SYSTEMS



**RYDLYME** biodegradable descaler is uniquely formulated to dissolve the toughest water scale, lime scale, mud and rust deposits from virtually any water-operated equipment. NSF A3 and ANSI 60 certified.



**RYDLYME Pumping Systems** are specifically designed to circulate **RYDLYME** through a vast array of equipment and systems to keep your facility at peak operating condition.

## CLEANERS & DEGREASERS



**RYDALL CC Coil Cleaner** is a biodegradable, concentrated solution that is safe for indoor and outdoor cleaning of air exposed surfaces on HVAC/R equipment. Dilutable and capable of being applied via foaming applicator. NSF A3 certified.



**RYDALL MP Multi Purpose Degreaser** is a biodegradable, versatile cleaner that quickly and safely removes oil, grease, grime and other pollutants from wettable surfaces and components. NSF A1 certified.



**RYDALL HD Heavy Duty Degreaser** is a biodegradable heavy duty, industrial grade degreaser. Used specifically on all carbon based derivatives that are found on the oil and/or process sides of your critical equipment or systems.



**RYDALL VP Specialized Degreaser** is a biodegradable, pH neutral degreaser specifically designed to safely and quickly clean and degas refinery process equipment. It can be applied in circulation or vapor phase applications.



**RYDALL DC Deodorizing Cleaner** is a biodegradable, ultra-concentrated cleaner designed to be used generally in janitorial applications such as floor, bathroom and window cleaning.

## ODOR CONTROL, WATER TREATMENT & WASTE CONVERSION



**RYDALL OE Odor Eliminator** is a unique, environmentally beneficial additive that is applied to landfills, compost or other organic odors. Naturally enhances methane release and production. Contains no masking agents, essential oils or fragrances.



**RYDALL WO Water Optimizer** is an environmentally beneficial additive that naturally reduces and prevents the formation of H<sub>2</sub>S, COD, BOD, FOG, TDS and TSS. Thereby reducing corrosion and discharge penalties while increasing production.



**AEPC Thermal** is a division of Apex Engineering Products Corporation (AEPC). Our mobile waste conversion plants are trailer mounted and ready for deployment!

1241 Shoreline Drive Aurora, Illinois 60504 T: 630.820.8888 | 800.451.6291 | F: 630.820.8886 | MADE IN THE USA

Apex Engineering Products has been formulating and manufacturing safe and biodegradable specialty cleaning chemicals for a diverse range of applications around the world. From our **RYDLYME** biodegradable descaler to our versatile **RYDALL** line of degreaser/cleaner, odor control and water treatment products, we aim to decrease downtime and increase efficiency.

We are a fourth-generation, family-owned company acclaimed not only for our biodegradable line of products, but also our in-depth and exceptional customer support. With decades of knowledge and experience in a wide array of applications, our professional technicians will work closely with you to determine the best solution for your facility's unique challenges.

Apex Engineering Products also takes great pride in being an ISO 9001 Certified Company providing the highest level of support and quality of products to our customers...**another formula that hasn't changed in more than 75 years!**