

APEX

QUARTERLY

THIRD QUARTER 2021

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RYDLYME BOILER CLEANING - COLD WEATHER IS AROUND THE CORNER, BE PREPARED!

RYDLYME REMOVES STRUVITE FROM A HEAT EXCHANGER IN A WWTP!

PLATE & FRAME CLEANING - DISSOLVE MINERAL DEPOSITS WITHOUT DISMANTLE!



**NEWS ON SAFE
CHEMICAL SOLUTIONS
FROM APEX ENGINEERING
PRODUCTS CORPORATION**



Watch a boiler descaling video!

Descaling Boilers

Colder weather is around the corner, don't wait to clean your boilers!

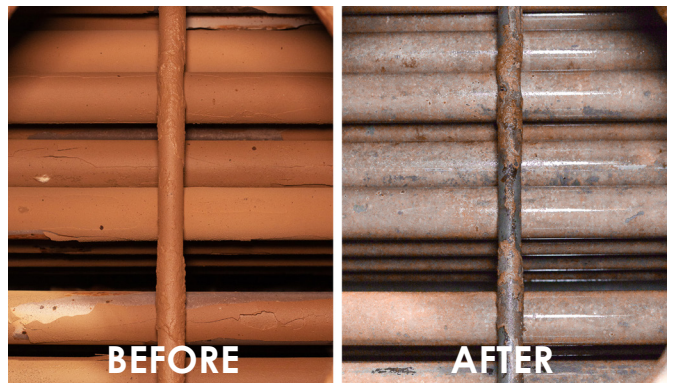
Boiler Basics

Boilers represent the “heart” of many institutions including: airports, condominiums, dry-cleaners, ethanol production, factories, food companies, general industry, hospitals, hotels, housing authorities, medical centers, office buildings, power utilities, schools, shopping malls, and any other locations where hot water or steam is an essential part of either production or operations.

Water Scale - The Ugly Truth

Water scale is the accumulation of minerals such as calcium and magnesium on the water side of boiler heating surfaces. When boiler water turns to steam, residual minerals are left in the boiler. These minerals then settle out of the boiler water and form scale on the boiler heating surfaces. If the water delivered to the boiler contains even small amounts of scale-forming materials, the internal heating surfaces of the boilers can soon become coated with scale, leading to overheating, increased fuel consumption and subsequent tube failures. Even light or spotty scale deposition can be the foundation for hot spots, cracking, and distortion. For this reason, regularly cleaning the interior of a boiler systems is imperative.

Boiler maintenance is crucial to the continued operation of your facility. One component to your boiler preventive maintenance program



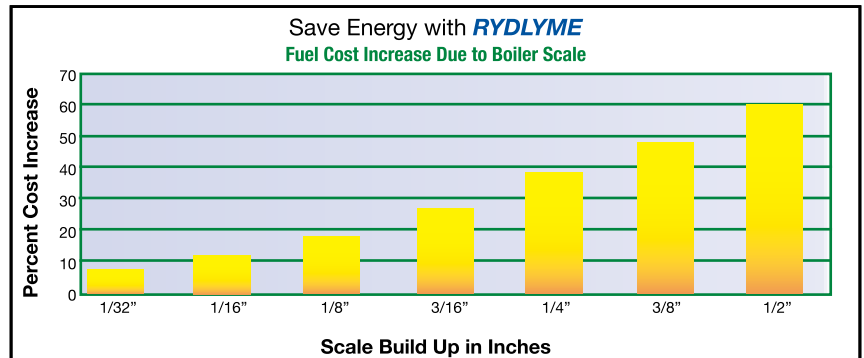
should be an annual cleaning to remove mineral scales that have accumulated within the boiler. These deposits are great insulators that inhibit heat exchange and cause the boiler to lose heat transfer, thus efficiency. For instance, as you can plainly see from our chart, scale that is only 3/16" thick will cause the boiler to use 27% more fuel! A common unknown fact is that boiler tube failures account for the majority of a power plant's forced outages. This, all because the boiler may be suffering from inadequate heat transfer.

Benefits to Preventative Maintenance

Now that we know just how dangerous scale can be to your equipment, let's discuss the benefits of preventative maintenance with **RYDLYME**. A simple circulation of **RYDLYME** throughout the boiler 1-2 times a year can save you money and costly repairs! The cost of a **RYDLYME** cleaning is much cheaper, faster and easier than brushing tubes, replacement or shivering temperatures!

Basic Boiler Cleaning Procedures

1. Shut down boiler.
2. Blow down with pressure still on.
3. Drain and flush unit.
4. Close steam valve.
5. Add **RYDLYME**, and then top off with water.
6. Circulate through the drain or low point and return from the pressure relief valve or high point of the boiler back to a vented container.
7. Circulate for 4-8 hours depending on volume.
8. Open steam valve.
9. Drain, flush, re-fill and start up.



For detailed instructions please visit our website or contact our technical staff for assistance.



“ Easily circulate **RYDLYME** through plate & frame heat exchangers without having to dismantle! Saves time & money! ”

RYDLYME
World's Leading Biodegradable Descaler

HEAT EXCHANGER DESCALING

The road to recovering efficiency

Water scale, lime, mud and rust deposits are a serious problem for virtually all industries who use water as an integral part of their manufacturing and heating/cooling processes. Equipment or systems with clean water passages operate in a designed and effective manner.

Once the water operated equipment or systems become fouled with scale, efficiency decreases, energy costs increase and the useful life of equipment is diminished. Failure to address water scale problems in a timely manner runs the serious risk of costly equipment or system shutdowns, repairs, or even replacement.

RYDLYME is the perfect heat exchanger cleaning chemical to circulate and remove mineral deposits from plate and frame heat exchangers! There is no need to disassemble the plates - Simply circulate **RYDLYME** through the heat exchanger removing mineral and scale build up in a safe and timely manner.



STRUVITE REMOVAL FROM HEAT EXCHANGER

A Midwest wastewater treatment plant was experiencing struvite buildup in their heat exchanger as well as the 62' of 6" piping. Struvite not only reduced heat transfer inside of the heat exchanger, but also reduced flow! The struvite also prevented various 6" check valves and 6" plug valves from being able to close and seat properly.

The solution was **RYDLYME**! The system was flooded with 330 gallons of **RYDLYME** and water. **RYDLYME** was circulated throughout the system and the results are as expected - struvite is no match for **RYDLYME**! The staff of the wastewater treatment plant are very happy with the performance and above all, safety of **RYDLYME**.



CHALLENGE

Struvite had restricted flow and heat transfer in a heat exchanger, 62' of 6" piping and various check/plug valves. The various valves were unable to close or seat correctly.

SOLUTION

(1) 330 gallon tote of **RYDLYME** and water were circulated throughout the struvite ridden piping and heat exchanger system.

RESULTS

After the **RYDLYME** cleaning, the plant was able to close and seat the various valves correctly and optimal flow and heat transfer was returned to the equipment!

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 & HAND SANITIZER



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.



HAND SANITIZER is formulated according to WHO guidance, AEPC's Hand Sanitizer utilizes an Isopropyl Alcohol Antiseptic 75% Topical Solution which helps reduce bacteria that potentially can cause disease! Call for pickup!

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 H₂S, 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 nearly 80 years!**