

APEX

QUARTERLY

FOURTH QUARTER 2018

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RYDLYME INCREASES A PLASTIC INJECTION MOLD FLOW RATE BY 13%!

RYDALL CC CLEANS DIRT & DEBRIS FROM THIS ROOF TOP UNIT!

FOUL TERRITORY: FLYING PORTA-POTTY?!



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

PLASTIC INJECTION MOLD CLEANING

One of the most important steps in the mold making process is a consistent and proper cooling cycle. This is due to the fact cooling rates can have a significant influence on the overall quality of the finished item. The cooling cycle must remain consistent throughout the entire production run to ensure all items are equal in quality.

The cooling process within plastic injection molding is critical to the quality of the mold, and may require about 50-75% of the total cycle time. From a production standpoint, this cycle time must be kept to a minimum in order to produce sufficient quantities on time. An optimum cooling process will also keep rejection rates to a minimum. Therefore, it is imperative to maintain clean, efficient cooling channels capable of removing heat within the set time. Over time, mineral deposits will fall out of the cooling water and will accumulate in the cooling passages. These deposits can cause poor product quality such as blistering, warping or twisting of part, thereby skyrocketing rejections and extending production time.

The solution for detrimental mineral deposits is **RYDLYME** Biodegradable Descaler. A diluted solution of **RYDLYME** can be circulated through all cooling passages to dissolve and flush the minerals in order to regain full cooling capacity.

CHALLENGE

Mold heat transfer and flow rates were found to be prohibiting acceptable quality at a large manufacturing facility.

SOLUTION

A diluted solution of 10 gallons of **RYDLYME** were circulated via a **10MDC** pump system through the mold's cooling passages for 30 minutes.

RESULTS

After the **RYDLYME** cleaning, flow rates increased an average of 13%. The mold is now prepared for installation and will be inspected thereafter. The rest of the facilities' molds are being scheduled for **RYDLYME** cleaning and the cooling tower loop is being sized as well.

BEFORE		AFTER	
CIRCUIT	GPM	CIRCUIT	GPM
1	32	1	34
2	29	2	31
3	29	3	30
4	18	4	20
5	13	5	15
6	13	6	15
7	15	7	19
8	11	8	15
AVERAGE	20.0	AVERAGE	22.4



INDUSTRIAL DESCALING SYSTEMS

Apex Engineering Products has been manufacturing **RYDLYME** since 1942. Any customer who has used **RYDLYME** knows how safe, effective and easy it is to use with wonderful end results and improved efficiencies on various equipment. Apex Engineering Products' technical team recommends that **RYDLYME** be circulated throughout the equipment being cleaned. An easy and convenient way to circulate is with one of our many industrial descaling systems.

These descaling systems, specifically manufactured in house for the use of **RYDLYME**, make cleaning cooling towers, heat exchangers, condensers, vacuum pumps, boilers, chillers and any other water-based equipment a snap. Each of our systems come with robust circulating buckets, Ipex true union valves, Iwaki pumps and many other features that make circulating **RYDLYME** easy. View these industrial descaling systems and other biodegradable and safe products on our website www.ApexEngineeringProducts.com.



15MDC



15MDC



10PPC



10CIP

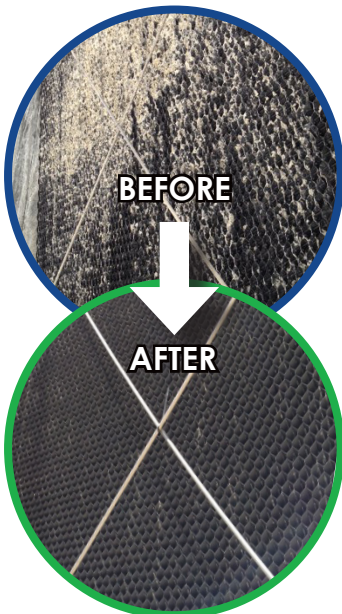


10MDC

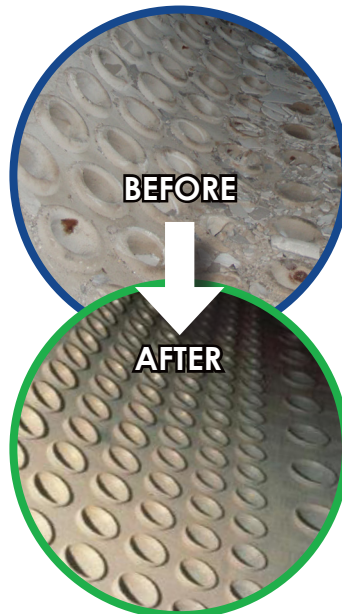


PumpMaster 115

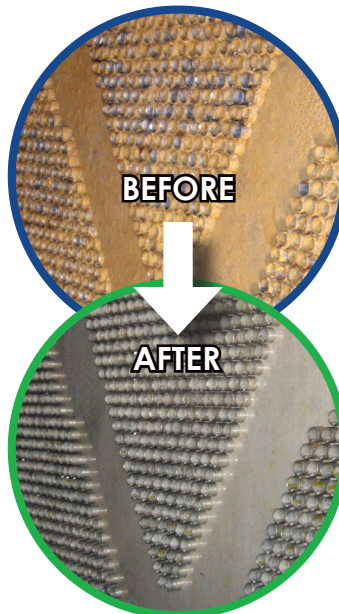
Cooling Tower Scale



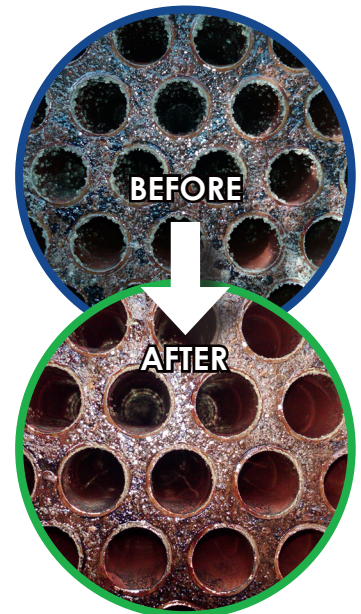
Boiler Scale



Condenser Scale



Chiller Scale





Cleaning coils should be part of a planned maintenance procedure for cooling and heating equipment. Why wouldn't you clean with the best?

Coils are literally everywhere. Hotels, universities, grocery stores, restaurants, apartment buildings - where there is heating and air conditioning, there are coils!

Air-cooled condensers, evaporator coils and other finned cooling and heating coils can become coated and clogged with organic and inorganic deposits such as oils, calcium, dust, dirt and other deposits. This contamination will, in turn, cause the coil to lose efficiency in the form of increased energy consumption, loss of air flow and a decrease in indoor air quality. Cleaning your coils a minimum of twice per year will restore your efficiencies and extend the useful life of your equipment.

RYDALL CC Coil Cleaner FEATURES:

Deep penetrating, foaming cleaner! • Low odor acid-based formulation!
Biodegradable & non-corrosive! • Safe on all roofing materials! • Fast acting! • Indoor and outdoor usage! • Removes oxidation and brightens!

RYDALL CC Coil Cleaner safely and effectively cleans finned cooling and heating coils and associated equipment. **RYDALL CC** is non-corrosive and will not corrode or tarnish aluminum or other metal surfaces. It is also non-hazardous and biodegradable making it safe for personnel and the environment.

RYDALL CC is the most versatile coil cleaner available. 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 all roofing materials, including rubber membranes. Use it on air-cooled condensers, permanent air filters, evaporator coils, window units, and any finned cooling and heating coils!



Biodegradable & non-corrosive! • Safe on all roofing materials! • Fast acting!



CASE STUDY

An American multinational oil & gas corporation turned to **RYDLYME** as a solution for removing scale deposits from one of their state-of-the-art, Midwestern production facilities. A unique deposit identified by the facility engineers as ferric oxide had deposited within cooling passages of an alkylation unit. Alkylation is a conversion process in petroleum refining to produce alkylates for high octane gasoline. The process is delicate and must be kept within optimum parameters in order to operate safely, efficiently and maximize production. The deposit prohibited adequate heat transfer, which resulted in elevated pressures up to 34psi.

RYDLYME had been successfully utilized to maintain plate and frame heat exchangers in other areas of the facility. After evaluating alternatives with facility engineers, technicians and procurement specialists, **RYDLYME** was again selected as their solution. The **RYDLYME** cleaning took place during a single shift of a scheduled shutdown. After rinsing the cooling passages, a borescope was utilized in visually inspect the internals. Observations were described as 'Nice and shiny'. Upon startup and the unit achieving full operation, the pressure was recorded at just 4psi (ΔP - 30psi)! The facility engineers now understand how safe and easy **RYDLYME** is to use and plan to clean the unit every other year moving forward. **RYDLYME** has been a solution for water scale and mineral deposits at all Big Oil companies for over 75 years.

FOUL TERRITORY

A whimsical concoction of information in the world of scale, grease, odors and more.

The last thing you would expect to see soaring above you in the open air is a porta-potty. However, the photo below has not been altered!

Strong winds were able to pick up two porta-potties and send them flying above a pedestrian filled park in Colorado.

As the waste filled cube started to spin above the heavens, a not-so-heavenly 'substance' began raining down onto the scattering townspeople. The first porta-potty soared majestically while the second now mobile unit did not fare as well - it was destroyed in the air.

Luckily, no one was thought to be hurt from these abnormal gusts of wind.



Now the fun part - how to rid this awful odor? **RYDALL OE** would be the perfect remedy for this imperfect day. **RYDALL OE** is a unique, environmentally beneficial non-active biocatalyst containing a complex mixture of natural nutrients, vitamins, and trace elements specifically designed to eliminate industrial odors and corrosion problems without the need for hazardous chemicals or masking fragrances.

For more information on eliminating odors, please visit our website at

www.ApexEngineeringProducts.com

story via <http://huffingtonpost.com/>

DESCALER & PUMPING SYSTEMS



RYDLYME biodegradable descaler is specifically designed to dissolve the toughest water scale, lime scale, mud and rust deposits from virtually any piece of water-based equipment. **NSF-certified.**



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

CLEANERS & DEGREASERS



RYDALL CC Coil Cleaner is a biodegradable coil cleaner specifically designed to clean dirt, grease and soil residue from air-exposed surfaces of critical cooling or heating equipment. **NSF-certified.**



RYDALL MP Multi Purpose Degreaser is a biodegradable, highly concentrated degreaser/cleaner that quickly and safely removes oil, grease, grime and other pollutants from all surfaces and components. **NSF-certified.**



RYDALL HD Heavy Duty Degreaser is a biodegradable, heavy-duty degreaser used specifically on all carbon-based derivatives found on the oil and/or process side of your equipment or system.



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 product that vitalizes microorganisms already present on surfaces and help speed up their metabolic process to naturally rid surfaces of odor and disease-causing bacteria.

ODOR CONTROL & WATER TREATMENT



RYDALL OE Odor Eliminator is a unique, environmentally beneficial biocatalyst containing a complex mixture of natural nutrients, vitamins, and trace elements designed to eliminate industrial odors and corrosion problems.



RYDALL WO Water Optimizer is an environmentally beneficial additive that disallows the formation of H_2S , COD, BOD, FOG, TDS and TSS. This unique biocatalyst is also effective in enhancing methane production and O_2 content.

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For 75 years, 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 cleaners and degreasers, our products will decrease downtime and increase efficiency.

We are a fourth-generation, family-owned company renowned 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 knowledgeable technicians will work closely with you to determine the best solution for your facility's unique challenges. To further minimize your downtime, virtually all orders are shipped out within 24 hours.

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 over 75 years!**