

APEX

QUARTERLY

SECOND QUARTER 2019

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VACUUM PUMPS CLEAN!**

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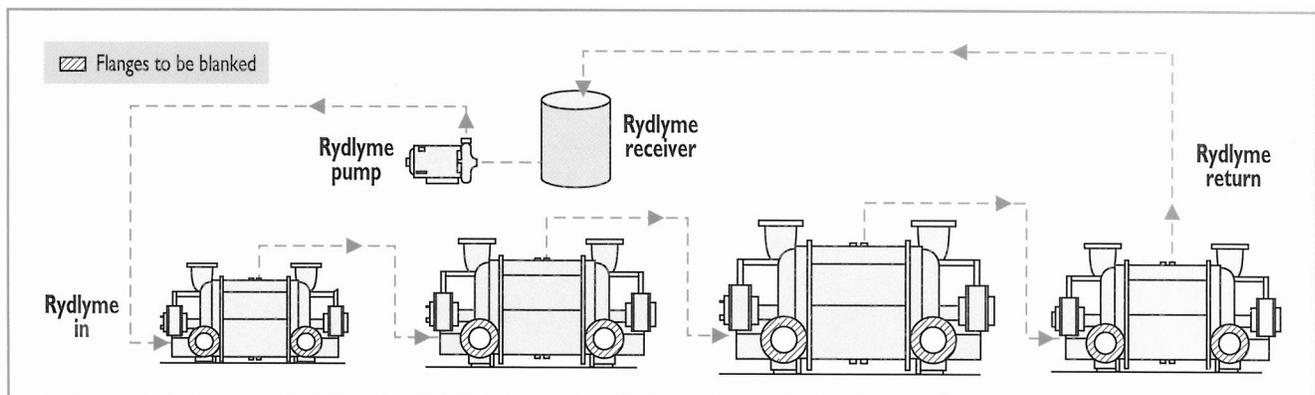
***RYDLYME* DESCALING SYSTEMS HELP
FINISH THE JOB QUICKLY!**



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

The buildup of water-formed mineral deposits within various types of water-cooled or operated equipment can result in varying degrees of problems. Often, the buildup of such deposits – calcium carbonate, iron oxides, even mud – can significantly reduce operational efficiency and lead to permanent damage to equipment, system corrosion or critical failure.

With the large quantities of water utilized in the paper industry, deposit formations are often unavoidable, even with the purest water and state-of-the-art water treatment. Common mill equipment in which buildup occurs are vacuum pumps, evaporators, liquor lines, digesters, paper machines and boilers. **RYDLYME**, a biodegradable descaling chemical solution, can rapidly dissolve damaging water-formed deposits into solution via a simple circulation process. For vacuum pumps, by pumping the solution in at the seal water and out the top housing plug, the entire jacket may be cleaned. Circulation is continued via a centrifugal pump in conjunction with a circulation container for 2-6 hours, whether cleaning any one-size pump or multiple pumps in series (depending on volume and severity). As the circulation of **RYDLYME** occurs, the deposits within are dissolved into solution, like sugar in coffee, returning the pump back to its optimal operating condition.



RYDLYME can be used throughout the mill to dissolve mineral deposits.

One way to maintain effective operation of equipment, without wear and tear, is periodic maintenance. Many plants have established preventative maintenance programs for their critical equipment. These plans include monitoring amperage on vacuum pump motors in order to determine when mineral deposits have begun to cause inefficiencies. Brief **RYDLYME** cleanings during each shutdown can result in significant drops in amperage readings and energy consumption thereby extending the equipment life.

A Wisconsin paper operation had their green liquor lines and recovery tank accumulate excessive calcium carbonate deposits, reducing a 4" inner diameter line to 1" and bringing transfer pumps on the system rated for 260 gal/min to 60 gal/min. Valves could not be closed even manually. Previously, piping had been replaced on the system at substantial expense, hydroblasting had been attempted unsuccessfully, but **RYDLYME** provided a solution.

The facility implemented the solution into quarterly scheduled downtimes, added it to the dissolving tank, and circulated it throughout the pipelines with the inline transfer pumps. Circulation required approximately 4 hours, and the system was spotless. **RYDLYME** is non-corrosive, so there is no loss of metallurgy with the system, and since the solution is biodegradable, the water makeup valves are simply turned on, and the solution is flushed to the normal plant sewer! Neutralization is not necessary, as **RYDLYME** is free-rinsing with water.

Manufactured by Apex Engineering Products Corporation, **RYDLYME** has been used in various industries for more than 75 years. It can be used in virtually any area of the mill, including the recovery area, wet end and on the generation side.

MARK BICKLER RETIREMENT ANNOUNCEMENT



Aurora, Illinois - Mark Bickler, President of Apex Engineering Products Corporation (AEPC), has announced his retirement! An alumnus of Northern Illinois University, where he graduated with a degree in finance, he has been with AEPC for over an illustrious 24 years. Starting his career with AEPC as an outside sales representative for the states of Indiana and Michigan, Mark has held several titles within the Corporation including Sales Manager and Vice President before reaching the epitome of his Presidential title that he holds to this day. He has been an incredible asset to AEPC in numerous ways throughout his successful career. In addition to his admirable leadership to the team, Mark has been an integral commander by increasing sales over an astonishing 700%!

Furthermore, Mark has increased over all brand awareness, implemented ISO 9001 standards, and has significantly increased employee count and established a well-honed independent sales representative network throughout our globe!

Mark's absence from the company will be surely missed, but will allow him time to focus on his family and other hobbies including golf and beer drinking. Mark's daughter, Kylie, is starting her sophomore year at the University of Kentucky while his son, Mason, will be a senior at Bradley University. This will also allow Mark time to spend with his wife, Chris, and his dog, Tucker!

A message from Mark Bickler: "I will be retiring from Apex Engineering Products Corporation at the end of this month. I have been part of the Apex story for 24 years and take pride in the fact that we have built a world-class operation that now reaches the majority of the industrialized world. This would not have been possible without our network of independent representatives and international distributors. I want to express my sincere thanks to everyone for his or her effort and support over these many years! It has been a pleasure working with everyone."

Over the past many years, Mark has prepared Michael and Kevin Ostermeier for this leadership transition. We all firmly believe that AEPC will continue to thrive under this new administration, perpetuating us into our 4th generation of family owned management.

Everyone at AEPC would like to thank Bicky for all of his diligent efforts, dedication and commitment to this organization. AEPC wishes MLB luck with all of his future endeavors and the next chapter with his family!

ETHYLENE REFINING COLUMN CLEANING

A world renowned petrochemical manufacturer had inspected one of their ethylene refining columns during a regularly scheduled shutdown. As ethylene is arguably the most important organic chemical in the plastics manufacturing process, serving as the starting block for a variety of products, the ethylene column is an essential piece of equipment. Upon inspection, the column was found to be in poor condition and required cleaning. The past method of cleaning was labor intensive, time consuming, and required manual brushing and a small maintenance team to enter confined spaces. This method required more than four days for the team to remove all contaminants within the column. Prior to the completion of the shutdown, the senior maintenance coordinator was tasked with determining a more effective cleaning technique.

Within the following month, after brief discussions with Apex Engineering Technical Staff and an onsite meeting with product representatives, **RYDALL HD** Heavy-Duty Degreaser was selected to be utilized for the subsequent cleaning because of its safety, neutral pH, low VOC and the fact that it's environmentally friendly. Typically, **RYDALL HD** would be diluted 1:1 with clean water, heated to approximately 160°F and circulated through equipment for a period of 4-8 hours prior to rinsing. This enables the sludge, oil and other contaminants to become emulsified and removed from the equipment's surfaces safely, quickly and effectively. However, the maintenance team was unable to heat the **RYDALL HD** solution and therefore extended the circulation time to 18 hours. Pictures before and after the cleaning are shown below. Other plant heat exchangers and parallel columns have been cleaned more recently with the same exceptional results, all without the prerequisite of elevated temperature.



CHALLENGE

Ethylene column clogged with sludge residue and oil buildup. Minimal time available for cleaning and dangerous, confined conditions for maintenance personnel.

SOLUTION

A single 330 gallon tote of **RYDALL HD** was diluted and circulated at ambient temperature for 18 hours.

RESULTS

All contaminants removed, spotless surfaces throughout the column! Less than 24 hours to completely finish this cleaning without personnel in confined spaces!



RYDLYME descaler and 15MDO pump cleaning a large boiler.

RYDLYME Descaling System 15MDC

RYDLYME can be purchased in various sized containers to solve your scaling issues.

The 1.5'' durable pump unit is assembled on a 2'X4' heavy duty plastic cart with 8'' swivel wheels. This high quality system contains a 30-gallon circulation bucket with a drain valve coupled via bulkhead fittings to multiple Ipex True Union Ball Valves for simplistic and versatile operation.

The extremely rigid magnetic drive pump only, **15MDO**, is mounted directly to the cart and comes with three 1.5'' diameter 10' hoses. The pump is GFCI wired and operated by a switch in a mounted weatherproof electrical box complete with a 20' power cord. A by-pass system is hard piped into this unit to accommodate both small and large applications, as well as water flushing the unit upon completion. The system is fully assembled and ready for immediate use as a **15MDC**.

RYDLYME Descaling System 15MDC Features:

- Multiple 1.5'' fittings with Ipex True Union Ball Valves
- 2'X4' heavy duty plastic cart with 8'' wheels
- 30-gallon circulation bucket with drain valve
- Three 1.5'' diameter 10' hoses
- GFCI wired and operated via weatherproof switch
- 20' power cord

RYDLYME Descaling System 15MDC Applications:

- Cooling towers
- Boilers
- Heat exchangers
- Chillers
- Condensers
- Vacuum pumps
- and much more!



Click to see how
the **15MDC** works!

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. **ANSI 60/NSF-Certified Nonfood Compounds (A3)**.



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!**