

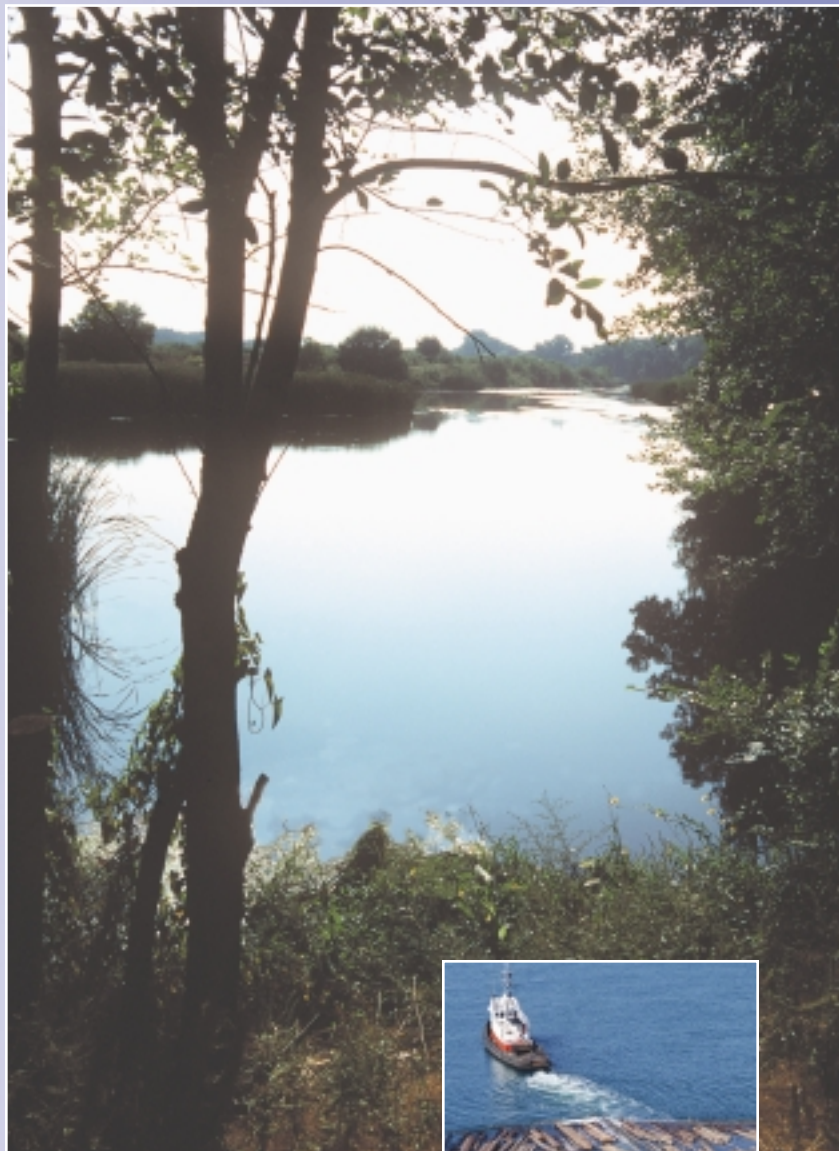
Manufactured Since 1942 by: Apex Engineering Products Corporation

RYDLYME

World's Leading Biodegradable Descaler

Pulp & Paper Industry

RYDLYME dissolves water scale, lime, mud and rust deposits safely, quickly and effectively!



*the **solution** to your
water scale problems*

RYDLYME & your mill

The pulp and paper industry is one of the four largest industrial users of water in North America. But where there's water, there's water-related problems caused by mineral deposits.

And these deposits are making withdrawals! Some mills have been plagued with varying degrees of water-related problems caused by mineral deposits, affecting operating efficiencies and leading to other, more costly problems including downtime.

These mineral deposits accumulate quickly (often within just three weeks) regardless of screens or treatment. Even a very thin coating of water scale will act as insulation and eventually retard the transfer of heat in your water systems, robbing you blind!

You can put an end to this thievery with **RYDLYME**, a safe and environmentally acceptable alternative to other scale removal methods.

**Once crystallization has occurred,
water-formed deposits accumulate
EXPONENTIALLY!**

RYDLYME can resolve the negative effects of water scale in the pulp and paper industry, such as:

- Heat-transfer loss
- Increased downtime
- Flow restrictions
- Increased cost
- Washing problems
- Corrosion
- Inaccurate flow measurements
- Decreased equipment life
- Formation problems
- Reduced efficiency
- Stock lumps
- Reduced machine speed
- Machine breakdowns
- Electrical costs
- Less profit
- Inefficient operation
- Shutdowns
- Excessive precipitate carryover
- Costly breakdowns
- Buildup of solids in clear well
- Decrease in runnability
- Scale deposition
- Less production
- Dirty products



RYDLYME even dissolves deposits from green liquor lines and tanks!

Free RYDLYME Demonstration

The typical integrated mill has a great variety of uses for water and each may have its own quality requirements. **RYDLYME** can be utilized in virtually any area of your mill, including the blow heat recovery area, wet end, paper machines, etc., and even in the co-generation side.

Apex Engineering Products Corporation has been successfully manufacturing the "World's Leading Biodegradable Descaler" since 1942! And with our

experience, field technicians and customer service, we can offer you the best products and service available.

So call now for your free demonstration and we will outline a proposal to help you maintain your mill at peak operating efficiency.



Why should you use **RYDLYME**?

RYDLYME is EFFECTIVE...

it dissolves approximately two pounds of scale per gallon!

RYDLYME is NON-HAZARDOUS...

it does not fall under any of the seven federally designated classes of hazardous waste!

RYDLYME is BIODEGRADABLE...

it has a biochemical oxygen demand of 16 mg/l and can be disposed of through existing plant sewers!

RYDLYME is SAFE...

it can be held in the open hand without injury!

RYDLYME is ECONOMICAL...

Call us at (800) 451-6291 to learn how an investment in **RYDLYME** can multiply your efficiency!

*By incorporating **RYDLYME** into your preventive maintenance program, you can keep your equipment running effectively and economically.*

Case History #2

Recently, a Nash series 904 vacuum pump was heavily fouled with water scale and rust at a well-known paper mill. Utilizing 110 gallons of **RYDLYME** and circulating for only a two-hour period, an astonishing 50-amp decrease in electrical load was recorded! After this simple "test," a free technical training seminar was performed for all their maintenance crew leaders. **RYDLYME** is now an integral part of their preventive maintenance program, which assures them that their facility is operating at peak efficiency.

But does it really work?

Just ask around!

Case History #1

A large containerboard manufacturer located in the Midwest successfully cleaned their green liquor tank and lines with **RYDLYME**. These two stainless steel 4" lines run parallel for 300', away from both of the transfer pumps, to a three-way valve, and become fouled with lime approximately every 90 days. After circulating **RYDLYME** for only five hours, the lines had a 44% increase in flow, the transfer pumps increased from 100 gpm to their rated 280 gpm, the recovery tank was thoroughly cleaned, all the valves were easily maneuvered, and we even cleaned all three scatter sprays! There has been a definite savings in operating costs and capital savings. In addition, the life expectancy of the pumps and piping will be dramatically increased and corrosion in the tank and scatter sprays minimized.

Case History #3

During a scheduled maintenance shutdown at a pulp mill, **RYDLYME** was put to use to thoroughly clean various equipment in their Blow Heat Recovery Area, including:

| | |
|--------------------------------|----------|
| Bleaching Plant Hot Water Heat | .20'x45" |
| Primary Turpentine Condenser | .26'x20" |
| Secondary Turpentine Condenser | .25'x30" |
| Blow Heat Secondary Condenser | .27'x40" |
| Chemiwasher | .25'x45" |
| Gas Cooler | .15'x23" |

The **RYDLYME** was 100% effective on the deposits encountered and the pulp mill supervisor could not believe how spotless the equipment was! Without exceeding six hours to clean any unit, this mill is now operating with dramatically improved efficiency.

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RYDLYME
World's Leading Biodegradable Descaler

Reference

Water Supply and Treatment, Jack G. Walters, 2nd ed., TAPPI 1989.

Deposit Analysis and Control Short Course, TAPPI, 1997.

the solution to your water scale problems

**A safe biodegradable
liquid solvent specifically
designed to dissolve all
water scale, lime, mud
and rust deposits, safely,
rapidly and economically.**

Listed below are just some of the types of equipment that have been thoroughly cleaned with **RYDLYME** in the pulp and paper industry.

- mill rolls
- air compressors
- after coolers
- king rolls
- queen rolls
- calendar rolls
- chemiwashers
- closed circuit cooling systems
- condensers
- cooling towers
- gas coolers
- heat exchangers
- inter coolers
- green liquor lines
- green liquor tanks
- pulverizers
- vacuum filters
- vacuum pumps
- mud pumps
- lime pumps
- evaporators
- digesters
- washers
- head boxes
- presses
- indirect contact coolers
- absorption units
- strippers
- steaming vessels
- steam heaters
- refrigeration systems
- motor jackets
- compressor jackets
- internal combustion engines
- couch rolls
- and others

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