

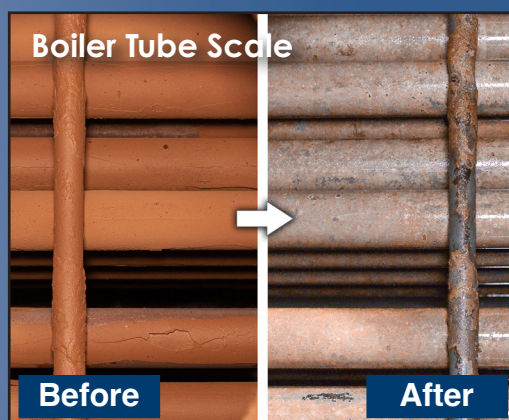
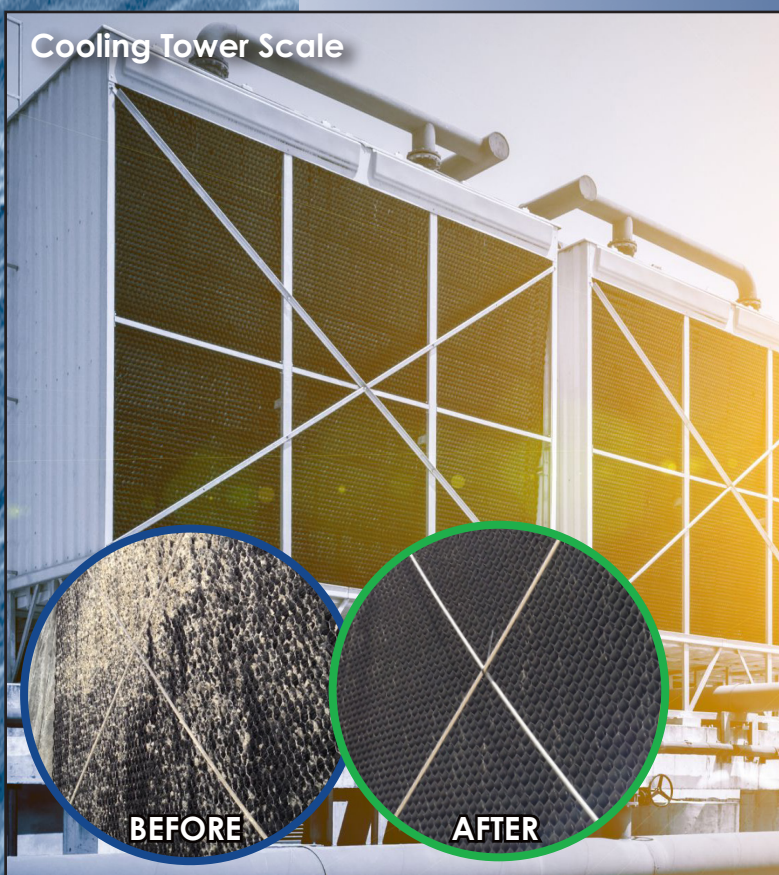
Manufactured Since 1942 by: Apex Engineering Products Corporation

RYDLYME

World's Leading Biodegradable Descaler

Aerospace Manufacturing

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



Cleaning Kits Available



*the solution to your
water scale problems*

The aerospace manufacturing process is a complex and intricate journey that transforms raw materials into the advanced aircraft and spacecraft that navigate our skies and beyond. Central to this process are various water-operated pieces of equipment, which play crucial roles at different stages of production.

Boilers generate steam or hot water necessary for heating elements or propulsion components, ensuring materials are processed at the correct temperatures.

Heat exchangers transfer heat efficiently between mediums, critical for maintaining optimal conditions for both materials and machinery.

Cooling towers are pivotal in dissipating heat from manufacturing processes, preserving the integrity of sophisticated equipment and materials by maintaining a controlled environment.

Condensers further aid in cooling efforts, converting steam to liquid to recycle heat efficiently, a testament to the industry's commitment to sustainability and efficiency. These pieces of equipment are vital in the aerospace manufacturing landscape, ensuring precision, safety, and quality in the creation of aerial marvels.



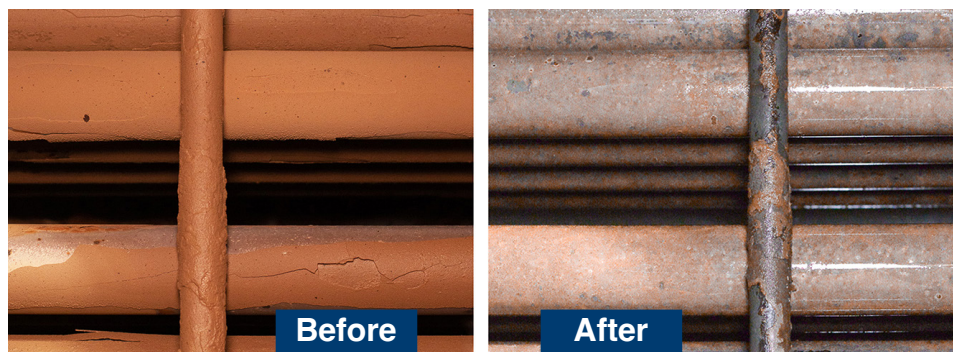
However, the challenge of water scale formation in these systems poses a significant threat to their efficiency and longevity, highlighting the need for effective solutions to maintain the seamless operation of these critical components.

Water scale, primarily composed of calcium carbonate (CaCO_3), forms in water-operated systems when hard water is heated or when there's a significant evaporation rate. This process, known as scaling, occurs because the solubility of calcium carbonate decreases with rising temperature, causing the mineral to precipitate out of the water and adhere to the surfaces of equipment.

The impact of water scale on heat transfer efficiency is profound and detrimental. Scale acts as an insulating layer on the heat transfer surfaces of equipment, significantly reducing their ability to conduct heat. In practical terms, even a thin layer of scale, as slight as 1/16 of an inch, can decrease heat transfer efficiency by up to 15%. This reduction in efficiency forces systems to work harder to achieve the desired temperatures, leading to increased energy consumption and higher operating costs.

Moreover, the presence of scale can lead to uneven heating surfaces, which may cause hot spots and increase the risk of equipment damage over time. In severe cases, the buildup can restrict water flow, leading to further inefficiencies and the potential for overheating and failure of critical components.

In aerospace manufacturing, where precision and reliability are paramount, the impact of scale on heat transfer efficiency can compromise the quality of production and lead to significant financial losses due to downtime and increased maintenance requirements. Thus, managing scale formation is crucial for maintaining the optimal performance of water-operated systems in this industry.

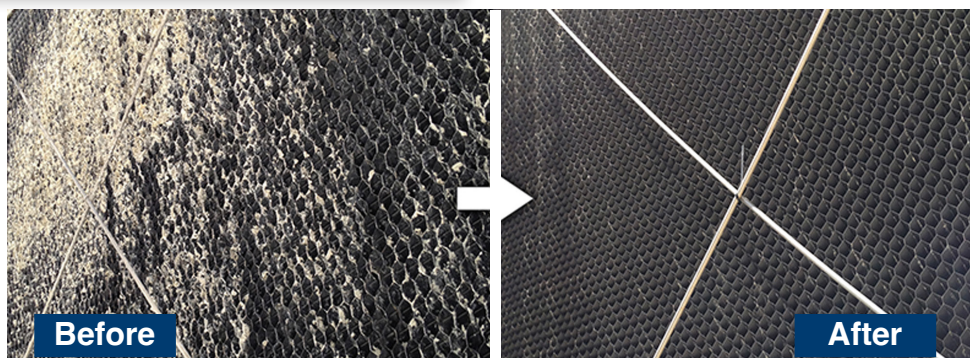


Boiler Tubes

The customer is extremely satisfied with the results of **RYDLYME** dissolving the scale surrounding the boiler tubes – **RYDLYME** is scheduled to clean their other boilers next month!

Cooling Tower

RYDLYME dissolves the scale in the cooling tower. The cooling tower noticeably improved and flow increased by over 50%



Vertical Heat Exchanger Tubes

The heat exchangers were restored to OEM specifications. **RYDLYME** saved over \$1 million a day!

Condenser Tubes

RYDLYME completely removed the scale from the condenser tubes returning it to its designed efficiency.



RYDLYME biodegradable descaler is as much as 12x faster than other chemical descalers, with most cleaning applications completed within a few hours. Unlike mechanical cleaning methods (e.g. brushing, rodding, hydro blasting), **RYDLYME** descaler can be circulated through equipment or system without arduous and costly dismantling. For many plants and facilities, a shutdown can cost thousands, even millions of dollars. In most cases, an online or direct injection cleaning with **RYDLYME** descaler can be set up for circulation or single-pass to avoid a shutdown!

RYDLYME descaler is the ONLY product of its kind that is truly non-toxic and safe! Unlike other chemical descalers and traditional harsh acids, **RYDLYME** descaler can be safely handled by personnel (you can even hold it in your hand without injury!) and there are NO transportation or handling restrictions! It can be safely disposed of in normal plant sewers, even in the case of an accidental spill at full-concentration!

Since 1942, **RYDLYME** biodegradable industrial chemical descaler has been used to safely and efficiently dissolve tough mineral deposits such as water scale, limescale, calcium, and rust. This revolutionary descaler is fortified with a complex formula of wetting and penetrating agents that dissolve into a solution for quick and easy disposal.

Pair **RYDLYME** with an industrial descaling system to circulate throughout your equipment!



15MDC

Cooling Tower Scale



10PPC

Boiler Scale



10CIP

Condenser Scale

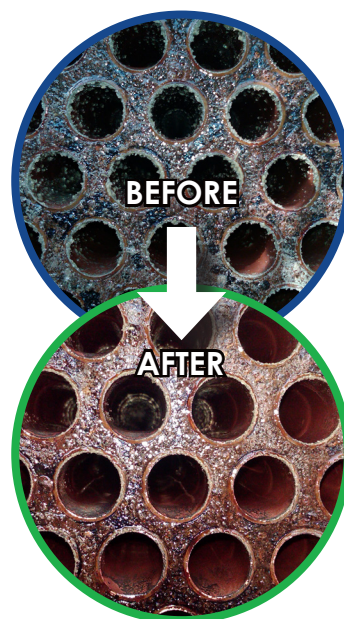
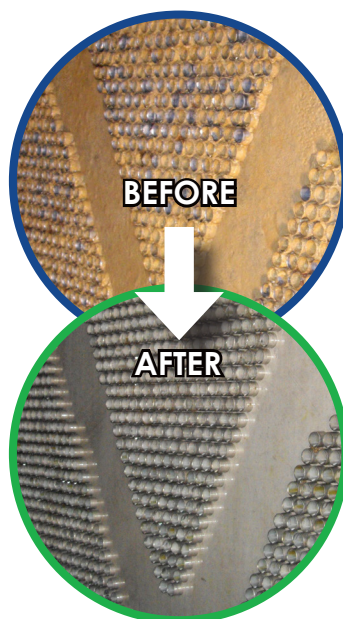
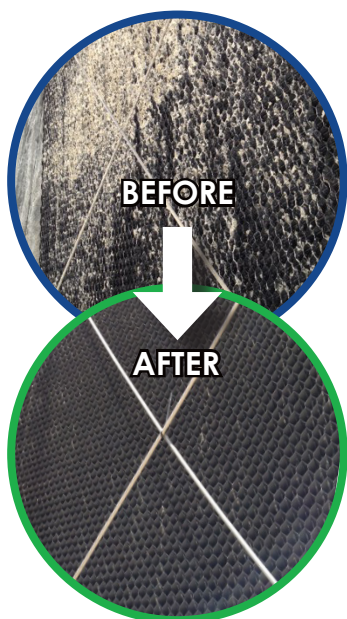


10MDC



PumpMaster 115

Chiller Scale



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