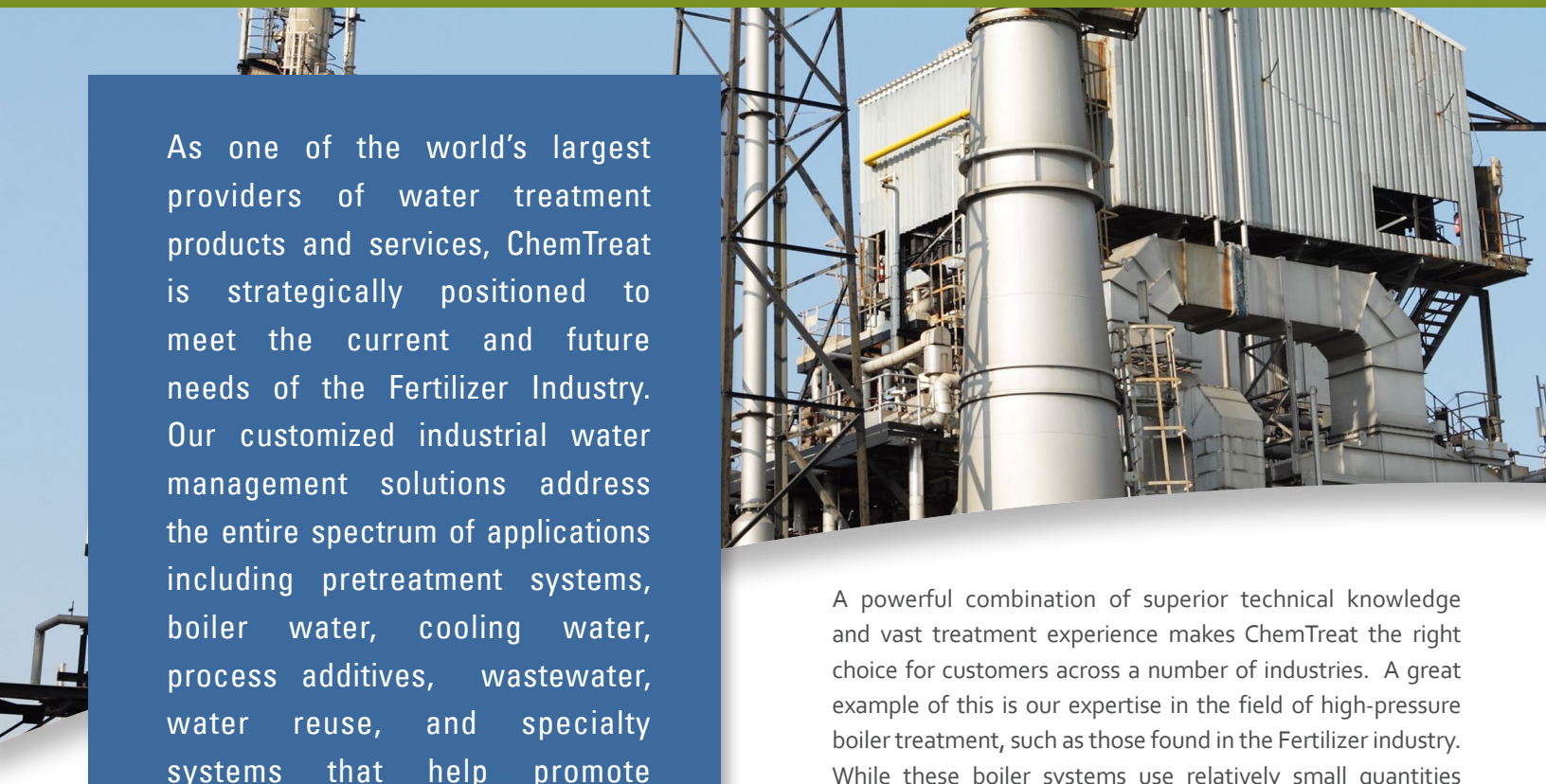
Solving Problems for the

FERTILIZER INDUSTRY

Phosphate, Pot Ash, Ammonia, Urea, UAN, Nitric Acid



As one of the world's largest providers of water treatment products and services, ChemTreat is strategically positioned to meet the current and future needs of the Fertilizer Industry. Our customized industrial water management solutions address the entire spectrum of applications including pretreatment systems, boiler water, cooling water, process additives, wastewater, water reuse, and specialty systems that help promote environmental sustainability.

Critical Systems Need Expert Care

With affordable natural gas continuing to drive growth in domestic fertilizer production, manufacturers are under intense pressure to optimize processes and increase throughput. A key determinant of their success is how efficiently they manage the utility systems that support production.

The impact of poor water quality on Fertilizer production can be quite costly. For example, an Ammonia plant producing 2,100 tons/day, with an efficiency drop of 1MBtu per ton, could result in excess costs of $3.5M per year. Additionally, production outages resulting from failures in cooling water or steam-generating equipment can mean a loss of $0.5M of profit per day. In most cases, Nitrogen producers do not have the time or expertise to properly mitigate these risks. Therefore, choosing a water treatment provider to manage and optimize their systems is a decision that producers cannot afford to get wrong.

A powerful combination of superior technical knowledge and vast treatment experience makes ChemTreat the right choice for customers across a number of industries. A great example of this is our expertise in the field of high-pressure boiler treatment, such as those found in the Fertilizer industry. While these boiler systems use relatively small quantities of chemical additives, ChemTreat recognizes that the real challenge is figuring out the correct application across the entire boiler plant. The misapplication of treatment chemicals can have effects on boilers, steam-driven equipment and other areas of process, resulting in production downtime and the possible loss of equipment. Therefore, ChemTreat has supplemented its investment in its talented network of field engineers by building an industry-leading technical team with extensive process application knowledge of high-pressure boiler treatment technology. Similar teams exist to support other critical applications such as raw water clarification, cooling towers, and reuse wastewater.

As ChemTreat has built lasting relationships with a wide range of valued customers over the years, we have developed a deep understanding of the unique problems that our customers face on a daily basis. We have leveraged this knowledge to create tailored treatment programs that are proven to protect your assets and maximize the efficiency of critical processes. It is this level of targeted expertise that allows us to prevent and troubleshoot problems before they can adversely impact our customers' ability to accomplish their core mission.

ChemTreat®

AMMONIA PRODUCTION

At a western Canadian Ammonia producer, ChemTreat's unique boiler dispersant resulted in improved iron transport in the 1,500-pound steam system. This program improved heat transfer and reduced the potential for metals deposition in the steam generators, which have previously experienced failures caused by fouling and deposition.

FERTILIZER COMPLEX

A Florida-based Fertilizer complex implemented ChemTreat's Cooling water solution for Sulfate, SIlica microbiological control program with total water balance approach allowing for doubling of Cycles of concentration savings Thousands of gallons per day in water use, reduced waste water generation , while mainlining clean process Heat exchanger surfaces exchangeer surfaces, extending time between turnarounds, increasing production and lower cost of operation.

NITROGEN FACILITY

At a midwest Nitrogen facility, ChemTreat's customized treatment program extended the length of time between heat exchanger and condenser cleanings. The facility previously needed to clean dozens of exchangers each year and the ammonia condenser twice a year. With ChemTreat's improved inhibitor, dispersant, and biocide treatment program, the heat exchangers only require cleanings during scheduled four-year turnarounds.

Applications Specific to the Fertilizer Industry

Pretreatment & Membrane Solutions

- Products to optimize water usage & manage complex issues such as high-silica concentrations
- Treatment solutions & expertise in clarification, demineralization, membrane bioreactors, reverse osmosis, ultra filtration, etc.
- Regenerating solutions for condensate polishers

Cooling Water Treatment

- Cooling technologies with high-temperature scale inhibition corrosion control enabling cleaner heat exchange surfaces extending time between turnarounds.
- Engineered chlorine dioxide technologies that safely offer efficient & cost-effective alternatives to chlorine gas and bleach systems

High Pressure Boiler Water Treatment

- Advanced polymer technology to prevent fouling in high-temperature boilers
- Organic oxygen scavengers
- Concentrated amine extenders

Remote Monitoring & Control

- Advanced control systems that can interface with web-enabled data management software
- Expertise to link our control equipment with your current operating systems

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