

CASE STUDY

Solid Chemistry Improves Plant Water Treatment Program While Increasing Safety

BACKGROUND

A poultry processing plant in the southwestern U.S. was experiencing severe problems in its 3,500-ton ammonia refrigeration system due to poor water treatment. Due to accessibility concerns, a liquid chemical water treatment program was not considered practical by plant personnel. Instead, a “pulse power” non-chemical water treatment device was used to treat one of the seven evaporative condensers, while remaining six systems were only treated by heavy manual bleed.

These practices were not effective and allowed heavy scale deposits to form on the evaporative condenser tubes, which resulted in high condensing pressure and increased energy costs. Severe corrosion also occurred, which significantly reduced the life span of the evaporative condensers. The plant was considering an expensive coating to help avoid premature replacement of the corroded system.

SOLUTION

Traditional liquid chemistry treatment was deemed too difficult and dangerous to implement. Safety concerns and handling requirements associated with transporting and storing hazardous liquid water treatment chemicals were the main points of concern. Limited available space for storage around the evaporative condensers and in the compressor room was also an issue. To address these concerns solid chemistry became the recommended choice. Solid chemistry (provided in recyclable plastic bottles) could easily be stored at the point of application and eliminated safety concerns.



RESULTS

The plant implemented the recommended solid chemistry system. Dissolvers were installed inside an enclosure located on the roof near the condensers, and the chemistry was provided in 11 pound bottles that could easily be transported to the roof as needed. The system provided an effective and reliable water treatment program that help remove energy-robbing scale deposits from the condenser tubes while also controlling corrosion to extend the systems life and reliability. Additionally, it solved the handling, space and storage issues, reduced liability associated with splash and spill concerns, and reduced fuel and greenhouse gas emissions associated with product delivery.



HANDLING, SPACE
& STORAGE ISSUES
SOLVED



SAFETY SAVINGS
RECOGNIZED

866.489.9831

APTECHSOLIDS.COM

PRODUCTS USED

Cooling Towers

.....

C20-C-T

Scale Reduction

DuroKlor 56

Oxidizing Biocide

