

# TITAN360™

ChemTreat's TITAN360™ is a ground-breaking, all-in-one product designed to treat a wide range of boiler systems in many different industries.

## Why TITAN360™?

Traditional boiler treatment requires the dosage and monitoring of multiple separate products: a dispersant, oxygen scavenger, and neutralizing amine. Treating a boiler in this manner presents a host of challenges, including:

- Storage and dosing equipment, inventory management, and time associated with on-site mixing or diluting of products
- Interaction with large volumes of multiple chemicals and management of costly effluent discharge containing phosphates
- Higher water usage to offset the high conductivity contribution of traditional inorganic treatments

TITAN360™ is an all-in-one mixture of neutralizing amines, an organic corrosion inhibitor and a dispersant, effectively treating the water-steam cycle without multiple chemical feed points. With a simple test kit, applying TITAN360™ provides peace of mind that the proper treatment level is maintained. TITAN360™ is a safe, low toxicity, easy-to-apply alternative to the traditional multi-chemical boiler treatment program.

- Innovative, low conductivity organic formulation proven to reduce water usage and energy consumption
- Excellent corrosion protection of the water-steam system with a filming inhibitor, reducing the need for an oxygen scavenger
- Simplified application decreases service time and equipment required
- Improved heat transfer through the combined action of dispersant & filming amine, which maximizes boiler performance





## Proven Results

### *Paper mill reduces water consumption by 50%*

A paper mill was seeking an efficient solution to reduce water usage with its two boilers. These boilers, with demineralized makeup water, produced 24 ton/h of steam and had a condensate return of 90%. With the introduction of TITAN360™ technology, the product was dosed proportionally to the makeup water, which reduced conductivity by more than 40%. This reduction in conductivity allowed for the boiler to operate at higher cycles of concentration and reduced blowdown by 50%, which in turn reduced the paper mill's demand for fresh water resources. Additionally, TITAN360™ delivered further savings with the reduction of chemical consumption and operator time required to treat the boilers.

### *TITAN360™ reduces iron levels to less than 5 ppb*

A power plant that provides power and steam for a food processing operation was experiencing high iron residuals with a solid alkalization water treatment program. The 609-psig water tube boiler utilized reverse osmosis as the makeup water and had a condensate return of 95%. Upon treatment of the water steam cycle with TITAN360™, iron levels in both the boiler water and steam decreased to less than 5 ppb. A routine inspection of the water-facing side of an evaporator tube was performed, which revealed that a predominantly uniform magnetite layer less than 10 µm was present. The magnetite layer also showed no signs of surface defects or impaired growth.

### *Wood manufacturer saves \$228,200 annually*

A laminate wood manufacturer was looking for a way to reduce water and energy consumption in steam production for process heating and drying. The three 319-psig boilers utilized makeup softened water and a refuse incinerator, produced more than 105,000 tons of steam per year with a condensate return of 70%. The traditional treatment, which utilized sulfites and phosphates, was replaced with TITAN360™ technology. Condensate return increased by 40% through improvements in condensate quality, makeup water consumption decreased by 38%, concentration cycles increased by 60%, and steam production breakdowns were reduced by 40%. The majority of the cost savings (40%), was due to a reduction in gas consumption.

## Benefits of TITAN360™ Technology:

- **Organic formulation** adds lower conductivity in feedwater, allowing for higher cycles of concentration and reducing the potential for carryover
- **Filming & neutralizing inhibitor** promotes a compact and homogeneous magnetite film, reducing the need for an oxygen scavenger
- **Improved heat transfer** through the combined action of filming inhibitor & dispersants, which lift & clean existing deposits & reduce the potential for under deposit corrosion
- **Peace of mind** that sufficient levels of product are being fed, with a simple test kit that measures residual filming amine in the system
- **Simplified application** into one dosage point removes the need for multiple feed pumps

