

What is 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.

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

- 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



ChemTreat cannot guarantee results.

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.

TITAN360™ PROVIDES SUPERIOR CORROSION PROTECTION

Intermittent operations posed a challenge for a 225 MW combined cycle power plant whose boilers were experiencing high levels of iron. The boiler system consisted of 2 gas turbines, 2 HRSG units, and 2 steam turbines that produced 78 ton/h of steam. Each HRSG unit had a high pressure drum that produced 240 k#/h of steam at 1450 psig.

Without a means to monitor and control the current treatment, performance was difficult to determine. TITAN360 decreased iron levels significantly and the operators were able to consistently maintain and measure a residual with the TITAN360 test kit, which indicated that there was sufficient protection of the metal surface. Boiler inspections revealed that there were no signs of active corrosion or flow accelerated corrosion.

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 a refuse incinerator to produce more than 105,000 tons of steam per year. 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.

Results are examples only. They are not guaranteed. Actual results may vary.

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

