CASE STUDY

Global Food and Beverage Company Improves Boiler Efficiency with TITAN360™

Background

A bottling and canning facility in the Midwestern US sought to reduce corrosion in its condensate lines to enhance system reliability and reduce fouling caused by iron residuals in their boilers.

After applying a film-forming treatment to the steam header for several years, iron residuals in the feedwater and condensate iron residuals remained elevated, and frequent leaks in the condensate piping led to unscheduled downtime for repairs.

Solution

ChemTreat proposed TITAN360™, a water-based formulation containing stabilized film-forming amine (FFA), which was applied using the same method as the previous program. TITAN360 binds to iron oxide, removes loose iron, and forms an adherent film that passivates metal surfaces to reduce corrosion.

The previous product was dosed at 14–18 ppm and showed no detectable residual in the returning condensate. TITAN360 was dosed at 2 ppm and achieved a 3–4 ppm residual return, reducing the feed rate by over 85%.

Results

Applying TITAN360 significantly reduced iron residuals in the facility's boiler system and maintained boiler efficiency.

- **54% reduction in condensate system iron levels, from 0.065 to approximately 0.03 ppm.**
- **53% reduction in boiler feedwater iron levels, from 0.075 ppm to 0.035 ppm.**
- **83.9% direct boiler efficiency maintained.**

TITAN360 helped the plant lower corrosion rates in the condensate lines, which reduced unscheduled downtime associated with pipe failures, resulting in increased output and revenue.

By maintaining boiler efficiency at a consistent rate, this technology will also help extend the intervals between costly jet tube cleanings to decrease maintenance costs.

TITAN360™

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

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