CASE STUDY

Air Separation Plant Reduces Azole Discharge, Heat Exchanger Corrosion, and Chemical Costs with MultiCuRE™

Background

A large industrial air separation company in the Southern US was feeding an azole-based product to inhibit corrosion in their brass and mild steel heat exchangers.

The plant was looking for an alternative treatment program to reduce azole discharge into local waterways while improving corrosion rates.

Solution

ChemTreat began implementing proprietary MultiCuRE, a low-azole corrosion inhibitor, which works by forming a hydrophobic, halogen-resistant film on metal surfaces to reduce corrosion.

The product was base fed via mass balance and verified with an on-line azole residual detection probe. Treatment performance was monitored with corrosion coupons and on-line corrators.

Corrosion coupon showing the hydrophobic film formed by MultiCuRE

Results

Containing 80% less azole than the incumbent treatment program, MultiCuRE enabled the air separation plant to reduce azole discharge, helping them meet their environmental goals.

The improved cost performance of MultiCuRE over the azole-based program allowed the facility to reduce water treatment chemical spend.

The plant also saw a significant improvement in corrosion rates. Brass corrosion decreased from 2.1 to 0.4 mpy, and mild steel corrosion decreased from 2.3 to 1.6 mpy.

5X brass corrosion reduction

1.4X mild steel corrosion reduction

Based on the product's positive impact on environmental goals and chemical costs, the company continued using MultiCuRE after the initial trial ended and plans to implement it at other facilities.

MultiCuRE™

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

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