

RECORDED BENEFITS

- Reduced cooling water contamination
- Extended heat exchanger service life
- Improved heat exchanger reliability
- Reduced environmental impact

Clean Cooling Towers and Process Leak Reduction Keep Large U.S. Refinery Online

Performax™ Cooling Water Program

Customer Challenge

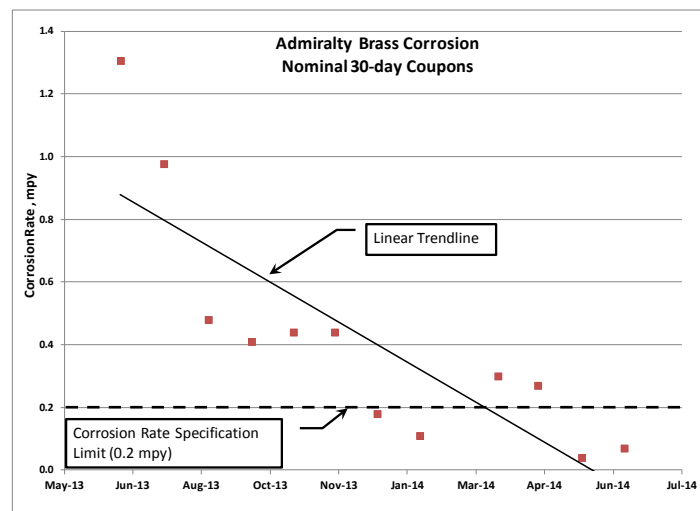
Challenging make up water conditions, driven by wide fluctuations in surface water quality, inclusion of RO reject water and addition of sulfuric acid and bleach, exacerbated admiralty brass corrosion rates at one of the largest US refineries. The refinery had an aggressive target of reducing admiralty brass corrosion rates from <0.5 mpy to <0.2 mpy to reduce the frequency of cooling water contamination by hydrocarbon leaks and to extend equipment life.

Recommended Solution

Solenis implemented a comprehensive technical approach including thorough technical evaluation, improved laboratory procedures, advanced chemistry, real-time corrosion monitoring and local field engineers. Solenis replaced the existing azole corrosion inhibitor with Performax using an alternative azole chemistry. Continuous feed was replaced with intermittent feed based on real-time analysis of admiralty brass corrosion rates.

Results Achieved

Admiralty brass corrosion rates decreased 73%, reducing the average admiralty brass corrosion rate to 0.16 mpy. Equipment service life and reliability were extended. The potential for process contamination of the cooling water that could reduce heat transfer and increase environmental emissions was also reduced.



Admiralty Brass Corrosion Reduction

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