CASE HISTORY
#0-08

Water Usage Reduced by 15% and Chemical Treatment Costs Reduced by 50% with ChemTreat Quadrasperse®

BACKGROUND

In an effort to reduce costs, reduce water usage, and improve corrosion/scale protection, an evaluation of ChemTreat Quadrasperse® was initiated at a Michigan steel plant.

PROBLEM

Cooling water at the plant is used to cool an electrical arc furnace (used to melt the steel), electrical lines to the arc furnace, and a hot dust duct. The water is jacketed around the furnace and dust duct and experiences significant heat transfer.

The steel plant had been using a traditional alkaline phosphonate program. The competitive program was limited to 4 cycles of concentration and was experiencing severe copper and carbon steel corrosion. The iron level in the circulating water was >25 ppm, the copper level was >4 ppm, and the color of the water was orange. In addition, the metal surfaces, cooling tower fill, and heat exchangers were coated with an iron-orange based silt.

SOLUTION

ChemTreat Quadrasperse® was put on-line, with immediate favorable results. With the Quadrasperse® program, cycles of concentration were increased to 8. This eliminated 1,000,000 gallons of make-up and blowdown on an annual basis. Corrosion rates have been maintained at <1.0 mpy for mild steel and <0.1 mpy for copper, while most of the iron-silt deposit has been sequestered and removed from the cooling tower fill and metal surfaces. Use of CL-4846 Quadrasperse® has enabled the steel plant to reduce purchased makeup water by 15 percent and cooling water treatment costs by half.

BENEFITS

- 50 percent reduction in cooling water treatment chemical costs
- Makeup water usage reduced by 15%
- Improved corrosion and scale protection
- Online deposit removal with reduced system cleanings
- Direct testing for the Quadrasperse® polymer
- Clean, clear, recirculating cooling water

Contact your local ChemTreat Rep to find out how we can help you reduce your plant's operating costs.

(800) 442-8292