



Corrosion Coupon Report

Customer : Midwestern Meat Processing Plant
Address: Midwestern USA

Report Date: 7/18/01 to 1/24/02
Coupon Location: Evaporative Condenser

Coupon Data:

Coupon #	Type	Date In	Date Out	Initial Weight (g)	Final Weight (g)	Weight Loss (g)	Corrosion Rate (mpy)
W2220	MS 1010	7/18/02	1/24/02	11.9039	11.8554	.0485	.21
W2226	MS 1010	10/30/01	1/24/02	11.8031	11.7141	.089	.86
	AVERAGE						.53

Inspection:

The Coupon surfaces was free from deposits and from pitting. Both coupons indicate corrosion rates well below 1 mpy. This indicates excellent overall corrosion protection. The coupon which had been in the system for 6 month showed somewhat lower corrosion overall rates than the more recent coupon. There was some “copper-like” staining on the surface of coupon, but this did not appear to be related to system corrosion.

Report and Recommendations:

The corrosion coupon results indicate very low general corrosion rates during this time period. Corrosion rates below 1 mpy are generally considered very good as long as there in no significant pitting corrosion.

The low corrosion rates indicates good plant control of water chemistry in this system during this period.

The current treatment program is the new corrosion inhibitor program. We are using ortho phosphate and molybdate as corrosion inhibitors. The Ryznar index is maintained at a slightly corrosive condition to maintain scale inhibition. Maintaining low mild steel corrosion rates in this system is critical because the condenser tubing is previously galvanized tubing with the galvanized layer stripped off. High mild steel corrosion rates and or pitting corrosion will result in premature tube failure in the condenser.

Coupon Photos:



Corrosion Rate Calculation:

MPY= Weight Loss (g) * K Factor / (D * A * T) Where D=Coupon density in grams (Dms = 7.87g/cc), A=Coupon Surface Area in square inches (Ams=3.38sq in.), T=hours of exposure, and the

K factor (mpy)= 5.34×10^5

Prepared by Kansas Water Technologies 2-4-02