EF_CorrosionTest.EPS

Simulated Fuel Oil Storage Tank Corrosion Control Tests

Treatment	Dosage	Time (days)	Initial pH	Final pH	Corrosion rate (i.p.y.)	% Reduction in corrosion
Alken® 905	1 to 4000	30	7.8	7.7	0.000060	50.0%
Alken® 905	1 to 8000	30	7.4	7.3	0.000068	43.4%
Alken Even-Flo® 910E	1 to 4000	30	7.8	7.6	0.000085	29.2%
Alken Even-Flo® 910E	1 to 8000	30	8.0	7.9	0.000095	20.9%
Amine treatment from Cheminter	100 ppm	30	7.8	7.7	0.00011	8.3%
No treatment	0	30	8.0	7.8	0.00012	0.0%

The tests were run at ambient temperature, using 48 ml of a Diesel oil, blended to contain 18% of an 0.5% sodium chloride solution. Corrosion test coupons, suitable for the requirements of ASTM D935-66 Corrosivity Test Procedure (these are used in place of helical wire coils). The dimensions of the coupons are as follows: 3.5" x 0.5" x 0.0625". The formula for determining i.p.y. (inches per year), based on the loss in weight, is as follows:

$$IPY = \frac{\text{Loss in grams} \times 0.061}{7.8 \times 3.9 \times \text{Years}}$$