

The Effect of Corrosion Inhibitors on Antimicrobial Activity of Biocide in Water-soluble Cutting Fluid

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The effect of corrosion inhibitors on antimicrobial activity of biocide was investigated using the *Pseudomonas aeruginosa* which frequency of occurrence in contaminated fluids is very high, and its growth and survival is excellent. When a biocide was used with a corrosion inhibitor, the antimicrobial activity of it was affected by the corrosion inhibitor used. In case of Kathon 886 MW, its antimicrobial activity was increased when each of SS 510 and MEA was used. Triadine 3, Triadine 10 and Grotan BK showed the similar trend of antimicrobial effect for the corrosion inhibitors used. Their antimicrobial activities were increased when each of CP-105, CP-E-7 and MEA was used. The antimicrobial activity of each corrosion inhibitor was also compared. The results showed that CP-E-7 and MEA was bioresistant and the rest corrosion inhibitors were siosupportive. The antimicrobial activity of biocide itself was in the order of Triadine 10 < Triadine 3 < Kathon 886 MW < Grotan BK.