Short Communication

Corrosion Inhibition of Titanium by *Paecilomyces variotii* and *Aspergillus niger* in an Aqueous Environment

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Microbial activity can influence the corrosion behavior of metals through an inhibiting effect or an accelerating effect. Currently, research regarding microbiologically-influenced corrosion mainly focuses on bacteria such as sulfate-reducing bacteria and iron-oxidizing bacteria, but fungus can also influence corrosion processes of metals and materials. In this study, the corrosion behaviors of TA1 titanium were investigated through immersion in two fungi spore suspensions, containing *Paecilomyces variotii* and *Aspergillus niger*, which supplied an aqueous environment for up to 28 days. The reproduction of microorganisms and the formation of biofilms were observed using scanning electron microscopy. The effect of fungi upon the metal was measured with electrochemical methods. The results showed that the fungi had an inhibiting effect on the corrosion of titanium in an aqueous environment.

Keywords: Titanium, Fungi, Corrosion, EIS, MIC

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