Synergistic Effect of *Iron Bacteria* and *Vibrio* on Carbon Steel Corrosion in Seawater

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The microbiologically influenced corrosion and electrochemical behavior of 45 steel were investigated in the presence of *vibrio* and *iron bacteria* using the mass loss determination, electrochemical analysis method and surface analysis method. The results showed that the corrosion of 45 steel was accelerated for the presence of the two bacterial species. 45 steel immersed in mixed medium containing both *vibrio* and *iron bacteria* showed a lower free corrosion current potential and a decrease in impedance with immersion time. Scanning electron microscopy (SEM) revealed that the mixed bacteria system caused more severe pitting corrosion of carbon steel.

Keywords: Microbiologically influenced corrosion; *Vibrio*; *Iron bacteria*; Synergistic effect

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