

Identification of Bacteria Causing Corrosion

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Abstract: *Microorganisms they have been around for billions of years and can live in incredibly difficult environments and under extremely severe conditions. They utilize exceptionally diverse food sources and some of the by products produced by their metabolisms can be damaging to metals. The corrosion of a material when the presence of microorganisms plays a role in is known as microbiologically influenced corrosion (MIC). Activities of bacteria, Archaea, and fungi in colonies that create biofilms on surfaces of materials, or in local environments that directly contact materials, can result in MIC; and most metals, as well as some non-metals, can be affected by this type of corrosion Finding the characteristics of a microbiological presence where corrosion is present has numerous goals. These include establishing a link between microbiological activities, corrosion reactions, and corrosion products in a specific environment; identifying particular microbes that support the corrosion mechanism seen in that environment; and connecting corrosion reactions/corrosion damage with the presence of microbes at some point in the corrosion process. According to TM0212-2012, three requirements must be satisfied for MIC to be accepted as the root cause of internal corrosion.*

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