One type of corrosion that can be very harmful to almost all engineering materials is what is called microbiologically influenced corrosion, or briefly, MIC. Microbiologically influenced corrosion (MIC) is a kind of electrochemical corrosion that is enhanced by the effect of certain microorganisms including sessile bacteria. In this investigation, more than 200 samples collected from different systems of Iranian refineries have been examined (by culturing methods and observations) for corrosion-enhancing processes that occur either directly or indirectly as a result of the activity of living organisms. This handbook explains the interdisciplinary nature of MIC - the roles of microbiology, metallurgy and electro-chemistry are interrelated and complex.