Corrosion and Early Warning of SRB Corrosion in Oil and Gas Field Environment

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Abstract

Temperature, CO_2 partial pressure, Cl-concentration, cathodic protection potential, etc. will all affect the growth and corrosion behavior of SRB. Through weightlessness corrosion testing, electrochemical testing and 16S rRNA gene sequencing, the change in the quantity of SRB and the corrosion characteristics of materials in a simulated field environment were studied. The corrosion rate and life were predicted by monitoring the electrochemical characteristics of the material surface to ensure timely alarm in complex service environments to reduce the occurrence of corrosion failure accidents.