

论文

环氧树脂涂覆碳钢在垃圾渗滤液中的腐蚀行为

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摘要:

用极化曲线和电化学阻抗谱法研究了环氧树脂涂覆碳钢在NaCl-(NH₄)₂SO₄-NH₄Cl混合溶液与垃圾渗滤液中的腐蚀行为。结果表明, 在混合溶液与垃圾渗滤液中, 环氧树脂涂覆碳钢的腐蚀电位分别在-0.47 V ~ -0.61 V 和 -0.60 V ~ -0.68 V 范围内波动, 垃圾渗滤液比混合溶液的腐蚀性更强, 环氧树脂涂膜在两种腐蚀液中有良好的稳定性和防腐作用。

关键词: 垃圾渗滤液 环氧树脂涂料 腐蚀 电化学阻抗谱 等效电路

CORROSION BEHAVIOR OF EPOXY-POLYAMIDE COATED CARBON STEEL IN THE WASTE PERCOLATE

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Abstract:

The corrosion behaviors of epoxy-polyamide coated carbon steel in the mixed solution of NaCl-(NH₄)₂SO₄-NH₄Cl and in the waste percolate were investigated using polarization curve and electrochemical impedance spectroscopy (EIS) methods. The corrosion potential of the sample ranged from -0.47 V to -0.61 V in the mixed solution and from -0.60 V to -0.68 V in the waste percolate. The waste percolate showed a stronger corrosiveness than that of the mixed solution. The coating of the epoxy-polyamide exhibited a good stability and corrosion resistance in the above corrosive environment.

Keywords: waste percolate epoxy-polyamide corrosion EIS equivalent circuit

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