

Effect of NaVO₃ concentration on corrosion resistance of conversion coating on AZ91D magnesium alloy

Abstract

Anticorrosive oxide films were successfully prepared on AZ91D magnesium alloy by chemical conversion coating in La (NO₃)₃ electrolytes with and without NaVO₃. The morphologies and chemical composition were characterized by optical microscope, scanning electron microscope (SEM) and energy dispersive analysis (EDX). The corrosion resistances of the oxide films were evaluated by salt immersion test. The result showed that the oxide film formed in electrolyte with NaVO₃ is successful in providing superior corrosion resistance for AZ91D magnesium alloy