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Anticorrosive Formulation Based of the Epoxy Resin–Polyaminoamide Containing Zinc Phosphate Inhibitive Pigment Applied on Sulfo-Tartaric Anodized AA 7075-T6 in NaCl Medium

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Abstract
The addition of zinc phosphate pigment to standard epoxy coatings has been investigated as an anticorrosive and eco-friendly additive. In this study, we prepared two epoxy coatings without and with zinc phosphate for corrosion protection of AA7075-T6 substrates for different time exposures in NaCl solution. The two epoxy coatings were evaluated by electrochemical impedance spectroscopy and their surfaces were characterized by scanning electron microscopy. The results show that the addition of zinc phosphate to the anticorrosive formulation (epoxy resin–polyaminoamide) facilitated the formation of a barrier film, enhanced the barrier anticorrosive properties of the coatings and therefore inhibited the penetration of aggressive corrosive ions to the AA7075-T6 surface. © 2019, Springer Nature Switzerland AG.

Author Keywords
AA 7075-T6; NaCl solution; Standard epoxy coating; Zinc phosphate

Index Keywords
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