Corrosion Behavior of Zinc & Zinc-Cobalt Coatings Electrodeposited from an Acidic Chloride Bath

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The industrial and practical importance of zinc and zinc alloy electrodeposition is related to their strong protection level against corrosion of ferrous subtrates. The electrodeposition process is influenced by several factors that affect the physical and functional properties of the deposits. This work is devoted to the study of the influence of the presence of several organic additives (ethoxylated and aromatic compounds) on the corrosion resistance of zinc and zinc-cobalt coatings electrodeposited from a typical acidic chloride bath. Results lead to the conclusion that a judicious choice of additives creates coatings with an adequate corrosion resistance level.

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