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INFLUENCE OF ADDITIVES TO ELECTROLYTIC BATHS ON THE QUALITY OF DEPOSITS DURING ELECTRODEPOSITION

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Abstract:

Steel corrosion is a natural phenomenon that destroys the material by transforming it into rust reducing its mechanical properties. In order to guarantee the level of performance required of a steel part over time, it is important to slow down or stop the progression of corrosion. The use of different protection methods is necessary. Among these methods, electroplating constitutes a means of protection against metallic corrosion in its own right. Electrodeposition is an electrochemical process which allows the preparation of solid deposits on surfaces of conductive materials. The development of coatings requires the addition of small quantities of certain synthetic additives to the electrolysis bath in order to reduce surface roughness and improve the adhesion and shine of the deposit. The new research trend is focused on replacing synthetic additives with inexpensive, biodegradable and effective natural products such as natural product extracts.

Keywords: Electroplating, additives, biodegradable, natural products

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