

The Development of Cr³⁺ Passivation Chemical for Hot-Dip Galvanized Steelg

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Abstract

With increasing recognition of the environment and safety impact of Cr⁶⁺, attempts have been made to replace Cr⁶⁺ coating . In the future , environmental-friendly chemical conversions will be the good choices for hot-dip Galvanized steel treatment such as Cr³⁺ and Cr-free chemicals. Based on our experiments results, we concluded that the Cr³⁺ chemical was a good replacement which had good corrosion resistance performance as same as the Cr⁶⁺ chemicals. In this report, we introduce the main structure components and functions of each component in Cr³⁺ chemical, meanwhile we found out the relationships between each components by helping of the experiment data analysis (The uniform design method). Integrating the theory with experiment data, the newest Cr³⁺ chemical has been researched and developed.

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