

塗装に対する化成処理の考え方

Chemical conversion coating as pretreatment prior to paint finish

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抄 録

製品に塗装する美装効果は製品価値を高めることになるが、素材が金属製品の場合、経時によって錆、塗膜剥離および金属腐食部の拡大ともなると製品価値は下がり、製品に対する信頼性低下、不信感の原因となる。

塗装は単なる美装のみならず耐久性の付与にあり、その効果を発揮するため、特に金属製品は塗装前処理として化成処理が行なわれるのが普通である。

化成処理は各種素材と塗装塗膜の中間にあるため、塗装製品の機能保持を担う極めて重要な工程である。塗装品質の向上と安定化を目的とした化成処理技術確立について、自動車車体塗装を事例に素材に関する車体工程、化成処理工程、塗装工程に対する取り組み方、考え方の注意点をまとめた。

ABSTRACT

Paint finish over a product gives the product higher value through its decorative effects. When the product is metallic, paint-finished product may decrease its value through rust, peel-off of paint-film and propagation of rusting due to aging and can cause loss of reliability.

In this case, the function of paint finish is not only decoration but also to give longer durability. In order to secure the expected function, such metallic product normally receives chemical conversion coating as pretreatment.

Since conversion coatings are applied between substrates and paint films, it is an important process step to be compatible to both substrate and paint film to give optimum effects. In this paper, how conversioncoating technology contributes overall quality of the painted product in industry taking automotive industry as an example. It also discusses key points to be considered in the body shop, pretreatment line, and painting line for attaining higher overall quality.