

チタンおよびチタン合金における プラズマ電解酸化皮膜の構造と特性

Structures and Properties of Plasma Electrolytic Oxidation Coatings on Titanium and Titanium Alloys

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Abstract

The structures and properties of plasma electrolytic oxidation (PEO) coatings in alkaline electrolyte on titanium and titanium alloy Ti6Al4V were investigated. A dark gray anodic coating with 1~3 μ m thickness, the same as that described in the AMS 2488 standard, was obtained using PEO followed by mechanical post-treatment. It has been shown that the anodic coating exhibits excellent adhesion, a low friction coefficient, and enhanced wear resistance. After PEO and post-treatment, no substrate strength decrease or measurable change in dimension was observed.

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