

Title (en)

PROCESSES TO REDUCE INTERFACIAL ENRICHMENT OF ALLOYING ELEMENTS UNDER ANODIC OXIDE FILMS AND IMPROVE ANODIZED APPEARANCE OF HEAT TREATABLE ALLOYS

Title (de)

VERFAHREN ZUR REDUZIERUNG DER GRENZFLÄCHENANREICHERUNG VON LEGIERUNGSELEMENTEN UNTER ANODISCHEN OXIDSCHICHTEN UND VERBESSERUNG DES ELOXIERTEN AUSSEHENS VON WÄRMEBEHANDELBAREN LEGIERUNGEN

Title (fr)

PROCÉDÉS POUR RÉDUIRE L'ENRICHISSEMENT INTERFACIAL D'ÉLÉMENTS D'ALLIAGE DANS DES FILMS D'OXYDE ANODIQUE ET AMÉLIORER L'APPARENCE ANODISÉE D'ALLIAGES POUVANT SUBIR UN TRAITEMENT THERMIQUE

Publication

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Application

**EP 16150283 A 20160106**

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Abstract (en)

Anodic oxide coatings and methods for forming anodic oxide coatings on metal alloy substrates are disclosed. Methods involve post-anodizing processes that improve the appearance of the anodic oxide coating or increase the strength of the underlying metal alloy substrates. In some embodiments, a diffusion promoting process is used to promote diffusion of one or more types of alloying elements enriched at an interface between the anodic oxide coating and the metal alloy substrate away from the interface. The diffusion promoting process can increase an adhesion strength of the anodic oxide film to the metal alloy substrate and reduce an amount of discoloration due to the enriched alloying elements. In some embodiments, a post-anodizing age hardening process is used to increase the strength of the metal alloy substrate and to improve cosmetics of the anodic oxide coatings.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [X] US 2014083861 A1 20140327 - ASKIN ALBERT [US], et al
- [X] EP 2301760 A2 20110330 - FUJIFILM CORP [JP]
- [X] CH 691064 A5 20010412 - ALUSUISSE TECH & MAN AG [CH]
- [X] US 4518468 A 19850521 - FOTLAND RICHARD A [US], et al
- [X] US 2009050485 A1 20090226 - WADA KOJI [JP], et al

Cited by

EP4116466A3; US11877725B2

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