

Title (en)

METHOD FOR PRODUCING A CORROSION-RESISTANT, WEAR-RESISTANT ALUMINIUM SUBSTRATE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES KORROSIONSBESTÄNDIGEN UND VERSCHLEISSFÄHIGEN ALUMINIUMSUBSTRATS

Title (fr)

PROCÉDÉ DE FABRICATION D'UN SUBSTRAT D'ALUMINIUM RÉSISTANT À LA CORROSION ET À L'USURE

Publication

EP 3019644 B1 20170426 (DE)

Application

EP 14738390 A 20140707

Priority

- EP 13003524 A 20130712
- EP 2014001867 W 20140707
- EP 14738390 A 20140707

Abstract (en)

[origin: WO2015003798A1] The invention relates to a method for producing a corrosion-resistant and wear-capable aluminum substrate, which can be subjected to a heat treatment at temperatures of 140 °C or higher without the formation of cracks beginning. The corrosion-resistant and wear-capable aluminum substrate has an anodic oxide layer on aluminum and an organic or inorganic sol-gel paint layer applied to the anodic oxide layer as an outer cover layer. The anodic oxidation occurs in an electrolyte that redissolves aluminum oxide, in such a way that an anodic oxide layer having a thickness of 10 to 25 µm is formed. The sol-gel paint applied to the exposed surface of the anodic oxide layer is baked or hardened at a specified paint baking or paint hardening temperature (T). The thickness (D) of the anodic oxide layer is selected as a function of the subsequent paint baking or paint hardening temperature (T) as per (I), wherein the paint baking or paint hardening temperature (T) is in the range between 140 and 220 °C, and, before the paint coating, the anodic oxide layer is partially hot-water compressed in demineralized water at a temperature of 80 to 98 °C for 5 seconds to 5 minutes.

IPC 8 full level

C25D 11/04 (2006.01); **C25D 11/22** (2006.01); **C25D 11/24** (2006.01)

CPC (source: EP)

C25D 11/04 (2013.01); **C25D 11/22** (2013.01); **C25D 11/24** (2013.01); **C25D 11/243** (2013.01); **C25D 11/246** (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2824221 A1 20150114; EP 3019644 A1 20160518; EP 3019644 B1 20170426; ES 2626822 T3 20170726; WO 2015003798 A1 20150115

DOCDB simple family (application)

EP 13003524 A 20130712; EP 14738390 A 20140707; EP 2014001867 W 20140707; ES 14738390 T 20140707