

Title (en)

ALUMINIUM ALLOY STRIP WHICH IS RESISTANT TO INTERCRYSTALLINE CORROSION AND METHOD FOR PRODUCING SAME

Title (de)

HOCHUMFORMBARES UND IK-BESTÄNDIGES ALMG-BAND

Title (fr)

BANDE D'ALLIAGE EN ALUMINIUM RÉSISTANT À LA CORROSION INTERCRISTALLINE ET SON PROCÉDÉ DE FABRICATION

Publication

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Application

EP 13756053 A 20130822

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Abstract (en)

[origin: WO2014029856A1] The invention relates to a cold-rolled aluminum alloy strip made of an AlMg aluminum alloy as well as a method for producing the same. Furthermore, adequate components made from said aluminum alloy strips are also disclosed. The aim of the invention is to design a single-layer aluminum alloy strip that is sufficiently resistant to intergranular corrosion and is nevertheless very easily malleable so that even large-area deep-drawn parts, e.g. interior parts of motor vehicle doors, can be made with sufficient strength. Said aim is achieved by an aluminum alloy strip made of an AlMg aluminum alloy which has the following alloying components: Si \leq 0.2 wt.%, Fe \leq 0.35 wt.%, Cu \leq 0.15 wt.%, 0.2 wt.% \leq Mn \leq 0.35 wt.%, 4.1 wt.% \leq Mg \leq 4.5 wt.%, Cr \leq 0.1 wt.%, Zn \leq 0.25 wt.%, Ti \leq 0.1 wt.%, the remainder consisting of Al and inevitable impurities, each of which amounts to no more than 0.05 wt.% and the total amount of which amounts to no more than 0.15 wt.%. The aluminum alloy strip has a recrystallized structure, the average grain size of the structure ranges from 15 μ m to 30 μ m, preferably from 15 μ m to 25 μ m, and the final soft annealing of the aluminum alloy strip is performed in a continuous furnace.

IPC 8 full level

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Citation (opposition)

Opponent : Aleris Aluminum Duffel BVBA against European Pate

- EP 0818553 A1 19980114 - HOOGO VENS ALUMINIUM NV [BE]
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Opponent : Novelis, Inc.

- STEFAN LANG: "Entwicklung einer neuen AlMg-Legierung für Außenhaut- Karosseriebleche mit verbesserter Umformbarkeit", PHD THESIS, 1999, pages 44 - 49 , 78-79, 86-89, 130-133 and 182-183, XP055525920
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