

Title (en)

In-line surface treatment for obtaining aluminium extrusions coated with a corrosion-resistant layer

Title (de)

Inline-Oberflächenbehandlung zur Herstellung von Aluminiumstrangpressprofilen mit korrosionsbeständiger Beschichtung

Title (fr)

Traitement de surface en ligne pour obtenir des extrusions d'aluminium revêtues avec une couche résistante à la corrosion

Publication

**EP 2489448 A1 20120822 (EN)**

Application

**EP 11001244 A 20110216**

Priority

EP 11001244 A 20110216

Abstract (en)

Process for manufacturing aluminium alloy extruded profile parts which are resistant to the corrosion resulting from their contact with the air and humidity, comprising the following steps: a) providing a billet; b) extruding the billet through a die to create at least one profile having the desired shape and length and optionnally cooling or quenching the profile after the exit of the die; c) optionally stretching the profile; d) sawing the extruded profile to obtain profile parts at the desired length; characterised in that during step b) a corrosion-resistant layer is coated on the fresh metal surface exiting from the extrusion press by spraying a fluid solution near the exit of the die. The fluid solution is preferably a sol gel medium made from mixing a polysiloxane solution and an aqueous colloidal silica solution. Profile parts coated with a corrosion resistant layer obtained by the said process.

IPC 8 full level

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**B05D 2202/25** (2013.01)

Citation (applicant)

- US 4952452 A 19900828 - NIR ZVI [IL], et al
- CN 2885613 Y 20070404 - ZHUHAI DONGCHENG CHEMICALS CO [CN]
- CA 2625779 A1 20080916 - SUEDDEUTSCHE ALUMINIUM MANUFAKTUR GMBH [DE]

Citation (search report)

- [XYI] US 4115607 A 19780919 - HASEGAWA MUTSUO, et al
- [Y] EP 1457267 A1 20040915 - ALCAN TECH & MAN LTD [CH]
- [XAI] EP 1306144 A1 20030502 - ALCAN TECH & MAN AG [CH]
- [X] GB 1109248 A 19680410 - DURALUMIN
- [XI] JP S58176018 A 19831015 - YOSHIDA KOGYO KK
- [X] JP H0246969 A 19900216 - FURUKAWA ALUMINIUM

Cited by

US10596618B2; CN113263334A; CN106367790A; CN115069813A; CN107164709A; DE102015111440A1; IT20180004684A1; CN118180188A; EP3287211A1; US2018056363A1; JP2018032716A; CN107774963A; DE102015111440B4

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Designated extension state (EPC)

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DOCDB simple family (publication)

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