

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 optionally 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

B21C 23/00 (2006.01); **B05D 1/02** (2006.01); **B21C 23/01** (2006.01); **C23C 18/12** (2006.01); **C25D 11/04** (2006.01)

CPC (source: EP)

B21C 23/002 (2013.01); **B21C 23/01** (2013.01); **B21C 35/02** (2013.01); **B21C 35/023** (2013.01); **C23C 18/122** (2013.01); **C23C 18/1241** (2013.01); **C23C 18/1254** (2013.01); **C23C 18/127** (2013.01); **B05D 1/02** (2013.01); **B05D 3/0254** (2013.01); **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 - SUEDEDEUTSCHE ALUMINIUM MANUFAKTUR GMBH [DE]

Citation (search report)

- [XY] US 4115607 A 19780919 - HASEGAWA MUTSUO, et al
- [Y] EP 1457267 A1 20040915 - ALCAN TECH & MAN LTD [CH]
- [XA] 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; IT201800004684A1; CN118180188A; EP3287211A1; US2018056363A1; JP2018032716A; CN107774963A; DE102015111440B4

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2489448 A1 20120822; EP 2489448 B1 20131225

DOCDB simple family (application)

EP 11001244 A 20110216