Title (en)

AlMgSi-sheet for applications with high shaping requirements

Title (de)

AlMgSi-Band für Anwendungen mit hohen Umformungsanforderungen

Title (fr)

Bande AlMgSi pour applications ayant des exigences de déformation élevées

Publication

EP 2270249 B1 20130529 (DE)

Application

EP 09164221 A 20090630

Priority

EP 09164221 A 20090630

Abstract (en)

[origin: EP2270249A1] The method for producing a strip made of aluminum-magnesium-silicon alloy, comprises casting rolling ingots made of aluminum-magnesium-silicon alloy, subjecting the rolling ingots to a homogenization, hot-rolling the rolling ingots introduced at hot-rolling temperature, and then optionally cold-rolling the rolling ingots to a final thickness. The hot strip has a specified temperature of maximum 100[deg] C immediately after the outflow from the hot rolling pass and is winded-off with the specified temperature or low temperature. The hot strip is quenched under the use of platinum cooler (5, 5'). The method for producing a strip made of aluminum-magnesium-silicon alloy, comprises casting rolling ingots made of aluminum-magnesium-silicon alloy, subjecting the rolling ingots to a homogenization, hot-rolling the rolling ingots introduced at hot-rolling temperature, and then optionally cold-rolling the rolling ingots to a final thickness. The hot strip has a specified temperature of maximum 100[deg] C immediately after the outflow from the hot rolling pass and is winded-off with the specified temperature or low temperature. The hot strip is quenched under the use of platinum cooler (5, 5') and the emulsion-admitted hot rolling pass even at the outflow temperature. The hot rolling temperature of the hot strip before the cooling process is 400[deg] C during the hot rolling process. The thickness of the hot strip is 3.5-8 mm. The aluminum alloy is an alloy type of AA6014, AA6016, AA6060, AA6111 or AA6181. An independent claim is included for an aluminum strip.

IPC 8 full level

C22F 1/05 (2006.01); **C22C 21/02** (2006.01); **C22C 21/08** (2006.01)

CPC (source: EP KR US)

B22D 7/005 (2013.01 - EP US); **B22D 21/007** (2013.01 - EP US); **C21D 1/26** (2013.01 - US); **C21D 1/62** (2013.01 - EP US); **C22C 21/02** (2013.01 - EP KR US); **C22C 21/08** (2013.01 - EP KR US); **C22F 1/043** (2013.01 - US); **C22F 1/05** (2013.01 - EP KR US)

Citation (examination)

- "DIN EN ISO 6892-1: 2009-12, Anhang NA", 2009
- "DIN 50145: Zugversuch, S.128-143"
- "Aluminiumtaschenbuch, 1 Grundlagen und Werkstoffe, 16. Auflage, S.136,137,682-685"

Citation (opposition)

Opponent : Novelis, Inc.

- "Rolling Aluminum: From the Mine Through the Mill", THE ALUMINUM ASSOCIATION, December 2007 (2007-12-01)
- ROLLING ALUMINUM: FROM THE MINE THROUGH THE MILL, December 2007 (2007-12-01), pages 5.2

Cited by

EP2570509A1; WO2013037919A1; EP2570257A1; WO2013037918A1; KR20150126975A; US9796157B2; US10471684B2; EP3622096B1; EP3060358B1

Designated contracting state (EPC)

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 SE SI SK TR

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AL BA RS

DOCDB simple family (publication)

EP 2270249 A1 20110105; **EP 2270249 B1 20130529**; **EP 2270249 B2 20200527**; CA 2766327 A1 20110106; CA 2766327 C 20160202; CN 102498229 A 20120613; CN 102498229 B 20140312; EP 2449145 A1 20120509; EP 2449145 B1 20190807; ES 2426226 T3 20131022; ES 2746846 T3 20200309; JP 2012531521 A 20121210; JP 5981842 B2 20160831; KR 101401060 B1 20140529; KR 20120057607 A 20120605; RU 2012102976 A 20130810; RU 2516214 C2 20140520; US 10047422 B2 20180814; US 10612115 B2 20200407; US 2012222783 A1 20120906; US 2016068939 A1 20160310; WO 2011000635 A1 20110106

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