

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 B2 20200527 (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 (opposition)

Opponent :

- JP H05306440 A 19931119 - FURUKAWA ALUMINIUM, et al
- US 2006032560 A1 20060216 - BENEDICTUS RINZE [NL], et al
- EP 0761837 A1 19970312 - KAISER ALUMINIUM CHEM CORP [US]
- WO 2013037919 A1 20130321 - HYDRO ALUMINIUM ROLLED PROD [DE], et al
- US 2004250928 A1 20041216 - BULL MICHAEL JACKSON [US], et al
- US 2004011438 A1 20040122 - LORENTZEN LELAND L [US], et al
- US 3392062 A 19680709 - DIETRICH ALTENPOHL, et al
- "Improved high strength low alloy steels", YEARBOOK OF AMERICAN IRON AND STEEL THROUGH HOT STRIP MILL CONTROLLED COOLING, no. 10, 1965, pages 281 - 304
- SHIMADZU: "Tensile test for Metallic Materials", Retrieved from the Internet <URL:http://www2.shimadzu.com/applications/Testing/i244.pdf>
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EP2570509A1; EP2570257A1; WO2013037919A1; WO2013037918A1; KR20150126975A; US9796157B2; US10471684B2; EP3622096B1; EP3060358B1

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Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2270249 A1 201110105; **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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