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 2449145 B1 20190807 (DE)

Application
EP 10723562 A 20100521

Priority
- EP 2010057071 W 20100521
- EP 09164221 A 20090630
- EP 10723562 A 20100521

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
C22C 21/02 (2006.01); **C22C 21/08** (2006.01); **C22F 1/05** (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)
- 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 3392062 A 19680709 - DIETRICH ALTENPOHL, et al
- US 2004011438 A1 20040122 - LORENTZEN LELAND L [US], et al
- E.R. MORGAN: "Improved high strength low alloy steels through hot strip mill controlled cooling", YEARBOOK OF AMERICAN IRON AND STEEL INSITUTE, 1965, pages 281 - 305

Cited by
WO2011000635A1

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 SE SI SK SM TR

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

DOCDB simple family (application)
EP 09164221 A 20090630; CA 2766327 A 20100521; CN 201080029594 A 20100521; EP 10723562 A 20100521; EP 2010057071 W 20100521; ES 09164221 T 20090630; ES 10723562 T 20100521; JP 2012518057 A 20100521; KR 20127001479 A 20100521; RU 2012102976 A 20100521; US 201113340225 A 20111229; US 201514928122 A 20151030