

Title (en)

Method for producing plural panel automotive members

Title (de)

Herstellungsverfahren von Kraftfahrzeug-Teilen mit mehreren Platten

Title (fr)

Méthode de fabrication de parties à panneaux multiples pour l'automobile

Publication

EP 1794338 B1 20110406 (EN)

Application

EP 05791238 A 20050825

Priority

- US 2005030194 W 20050825
- US 92670404 A 20040827

Abstract (en)

[origin: US2006042727A1] Disclosed is a method for producing aluminum vehicular structural parts or members such as from molten aluminum alloy using a continuous caster to cast the alloy into a slab. The method comprises providing a molten aluminum alloy consisting essentially of 2.7 to 3.6 wt. % Mg, 0.1 to 0.4 wt. % Mn, 0.02 to 0.2 wt. % Si, 0.05 to 0.30 wt. % Fe, 0.1 wt. % max. Cu, 0.25 wt. % max. Cr, 0.2 wt. % max. Zn, 0.15 wt. % max. Ti, the remainder aluminum, incidental elements and impurities and providing a continuous caster such as a belt caster, block caster or roll caster for continuously casting the molten aluminum alloy. The molten aluminum alloy is cast into a slab which is rolled into a sheet product and then annealed. The sheet has an improved distribution of intermetallic particles (Al-Fe, Al-Fe-Mn or Mg₂Si) and improved formability. Thereafter, the sheet product is formed into the vehicular structural part or member with sufficient strength and formability required by automotive industry.

IPC 8 full level

B22D 11/00 (2006.01); **C22C 21/08** (2006.01); **C22F 1/04** (2006.01)

CPC (source: EP KR US)

B21B 3/00 (2013.01 - KR); **B22D 11/003** (2013.01 - EP KR US); **B22D 11/0605** (2013.01 - EP KR US); **C22C 21/08** (2013.01 - EP KR US); **C22F 1/04** (2013.01 - EP US); **C22F 1/05** (2013.01 - KR)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

US 2006042727 A1 20060302; AT E504371 T1 20110415; CA 2578195 A1 20060309; CN 101166845 A 20080423; CN 101166845 B 20121121; DE 602005027365 D1 20110519; EP 1794338 A2 20070613; EP 1794338 A4 20080806; EP 1794338 B1 20110406; ES 2364275 T3 20110830; JP 2008511756 A 20080417; JP 5107039 B2 20121226; KR 20070091600 A 20070911; MX 2007002179 A 20071019; WO 2006026330 A2 20060309; WO 2006026330 A3 20080103

DOCDB simple family (application)

US 92670404 A 20040827; AT 05791238 T 20050825; CA 2578195 A 20050825; CN 200580028822 A 20050825; DE 602005027365 T 20050825; EP 05791238 A 20050825; ES 05791238 T 20050825; JP 2007530106 A 20050825; KR 20077004464 A 20070226; MX 2007002179 A 20050825; US 2005030194 W 20050825