

Title (en)  
ALUMINUM AUTOMOTIVE STRUCTURAL MEMBERS

Title (de)  
AUTOBAUTEILE AUS ALUMINIUM

Title (fr)  
ELEMENTS STRUCTURAUX EN ALUMINIUM POUR AUTOMOBILES

Publication  
**EP 1794338 A4 20080806 (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 Mg<SUB>2</SUB>Si) 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)  
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Citation (search report)  
• [X] US 2004094245 A1 20040520 - LI ZHONG [US], et al  
• [X] JP 2001032031 A 20010206 - KOBE STEEL LTD  
• [X] WO 03027345 A1 20030403 - ASSAN DEMIR VE SAC SANAYI A S [TR], et al  
• [E] WO 2005080619 A1 20050901 - ALCOA INC [US], et al  
• [E] WO 2006011242 A1 20060202 - NIPPON LIGHT METAL CO [JP], et al  
• See references of WO 2006026330A2

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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