Title (en)

PROCESS OF PRODUCING 5XXX SERIES ALUMINUM ALLOYS WITH HIGH MECHANICAL PROPERTIES THROUGH TWIN-ROLL CASTING

Title (de)

VERFAHREN ZUR HERSTELLUNG VON ALUMINIUMLEGIERUNGEN DER 5XXX SERIE MIT HOHEN MECHANISCHEN EIGENSCHAFTEN DURCH ROLLENBANDGIESSEN

Title (fr)

PROCEDE DE PRODUCTION D'ALLIAGES D'ALUMINIUM DE SERIE 5XXX A PROPRIETES MECANIQUES SUPERIEURES PAR COULEE ENTRE CYLINDRES

Publication

EP 1440177 A1 20040728 (EN)

Application

EP 01970501 A 20010925

Priority

TR 0100046 W 20010925

Abstract (en)

[origin: WO03027345A1] Present invention concerns a method for making fine-grained, formable aluminium alloy strips containing (by weight) essentially between 0,5-6,5 %Mg, 0-0,50 %Si, 0-0,60 %Fe, 0-1,2 %Mn, 0-0,50 %Cr, by twin-roll casting to a thickness ranging between 4 and 6,5 mm and cold rolling the strips to an intermediate gauge and reroll annealing the intermediate gauge material. The reroll-annealed material is then cold rolled to a final sheet gauge followed by a final recrystalizing or back annealing. The combination of controlled casting parameters, controlled amounts of Fe, Si, Mn, Cr and Mg and reroll and final annealing temperatures results in an improved sheet product in terms of finer grain size, higher elongation and formability, age softening and better corrosion resistance. Homogenization may be performed at 420°C to 550°C for a period of 4 to 15 hours and recrystallization is performed at 280°C to 375°C for a period of not less than 4 hours and not more than 8 hours.

IPC 1-7

C22F 1/047; B22D 11/06

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B22D 11/00 (2006.01); **B22D 11/06** (2006.01); **C22F 1/047** (2006.01)

CPC (source: EP US)

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