

Title (en)

HEAT TREATMENT OF FORMED ALUMINUM ALLOY PRODUCTS

Title (de)

WÄRMEBEHANDLUNG FÜR GEFORMTE PRODUKTE AUS ALUMINIUM-LEGIERUNG

Title (fr)

TRAITEMENT THERMIQUE DE PRODUITS EN ALLIAGE D'ALUMINIUM PROFILES

Publication

EP 1190109 B1 20031119 (EN)

Application

EP 00929167 A 20000511

Priority

- CA 0000558 W 20000511
- US 13437299 P 19990514

Abstract (en)

[origin: WO0070115A1] A process of producing a shaped article suitable for use as an automotive body panel intended for finishing by painting and, if necessary, baking. The process comprises obtaining a sheet article made of an aluminum alloy of the 2000 or 6000 series in a T4 or T4P temper and that exhibits an increase in hardness after painting and optionally baking, shaping the sheet article by forming to produce an intermediate shaped article, and subjecting the intermediate shaped article to a thermal spiking treatment prior to painting and optionally baking. The thermal spiking treatment involves heating the intermediate shaped article from ambient temperature to a temperature in a range of 150 to 300 DEG C with or without holding at that temperature for a period of time to enhance the increase in hardness.

IPC 1-7

C22F 1/04; **C22F 1/05**; **C22F 1/057**

IPC 8 full level

B05D 3/02 (2006.01); **B05D 7/14** (2006.01); **C22C 21/02** (2006.01); **C22C 21/06** (2006.01); **C22F 1/00** (2006.01); **C22F 1/04** (2006.01); **C22F 1/043** (2006.01); **C22F 1/05** (2006.01); **C22F 1/057** (2006.01)

CPC (source: EP)

C22F 1/04 (2013.01); **C22F 1/05** (2013.01); **C22F 1/057** (2013.01)

Cited by

CN103710653A; CN114717493A; US11874063B2; US10301709B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0070115 A1 20001123; AT E254673 T1 20031215; BR 0010547 A 20020213; CA 2372736 A1 20001123; DE 60006670 D1 20031224; DE 60006670 T2 20040930; EP 1190109 A1 20020327; EP 1190109 B1 20031119; ES 2209879 T3 20040701; JP 2002544392 A 20021224; NO 20015497 D0 20011109; NO 20015497 L 20020114

DOCDB simple family (application)

CA 0000558 W 20000511; AT 00929167 T 20000511; BR 0010547 A 20000511; CA 2372736 A 20000511; DE 60006670 T 20000511; EP 00929167 A 20000511; ES 00929167 T 20000511; JP 2000618518 A 20000511; NO 20015497 A 20011109