Title (en)

PROCESS FOR PRODUCING A CU-CR MATERIAL BY POWDER METALLURGY

Title (de)

VERFAHREN ZUM PULVERMETALLURGISCHEN HERSTELLEN EINES CU-CR-WERKSTOFFS

Title (fr)

PROCÉDÉ DE FABRICATION SELON LA TECHNIQUE DE LA MÉTALLURGIE DES POUDRES D'UN MATÉRIAU CU-CR

Publication

**EP 2600996 B1 20180606 (DE)**

Application

**EP 11751787 A 20110801**

Priority

- AT 4842010 U 20100803
- AT 2011000319 W 20110801

Abstract (en)

[origin: WO2012016257A2] The invention provides a process for producing a Cu-Cr material for a switching contact, in particular for vacuum switches, by powder metallurgy, said process comprising the following steps: (S2) a Cu-Cr powder mixture formed from Cu powder and Cr powder is pressed, (S3) the pressed Cu-Cr powder mixture is sintered to form the material of the Cu-Cr switching contact. The sintering or a subsequent heat treatment process is carried out with an alternating temperature profile in which the Cu-Cr powder mixture, or the Cu-Cr material, is heated at least twice alternately above an upper temperature limit value (S4) and is cooled again below a lower temperature limit value (S5). All of the steps are carried out at temperatures at which no molten phase forms.

IPC 8 full level

**B22F 3/10** (2006.01); **B22F 1/052** (2022.01); **B22F 3/16** (2006.01); **B22F 3/24** (2006.01); **C22C 1/04** (2006.01); **C22C 27/06** (2006.01); **H01H 1/02** (2006.01); **H01H 11/04** (2006.01)

CPC (source: EP US)

**B22F 1/052** (2022.01 - EP US); **B22F 3/1017** (2013.01 - EP US); **B22F 3/16** (2013.01 - US); **B22F 3/24** (2013.01 - EP US); **B22F 9/04** (2013.01 - US); **C22C 1/0425** (2013.01 - EP US); **C22C 1/045** (2013.01 - EP US); **C22C 9/00** (2013.01 - EP US); **C22C 27/06** (2013.01 - EP US); **H01H 1/0206** (2013.01 - EP US); **H01H 11/048** (2013.01 - EP US); B22F 2003/248 (2013.01 - US); B22F 2301/10 (2013.01 - US); B22F 2301/20 (2013.01 - US); B22F 2304/10 (2013.01 - US); B22F 2998/10 (2013.01 - EP US)

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 RS SE SI SK SM TR

DOCDB simple family (publication)

**AT 11814 U1 20110515**; CN 103201059 A 20130710; CN 103201059 B 20160629; EP 2600996 A2 20130612; EP 2600996 B1 20180606; ES 2686421 T3 20181017; US 2013140159 A1 20130606; US 2016107237 A1 20160421; WO 2012016257 A2 20120209; WO 2012016257 A3 20121101

DOCDB simple family (application)

**AT 4842010 U 20100803**; AT 2011000319 W 20110801; CN 201180038423 A 20110801; EP 11751787 A 20110801; ES 11751787 T 20110801; US 201113813996 A 20110801; US 201514976553 A 20151221