

Title (en)

STARTING MATERIAL AND PROCESS FOR PRODUCING A SINTERED CONNECTION

Title (de)

AUSGANGSWERKSTOFF UND VERFAHREN ZUR HERSTELLUNG EINER SINTERVERBINDUNG

Title (fr)

MATÉRIAUX DE DÉPART ET PROCÉDÉ DE RÉALISATION D'UNE LIAISON FRITTÉE

Publication

EP 2629910 A1 20130828 (DE)

Application

EP 11713483 A 20110329

Priority

- DE 102010042702 A 20101020
- DE 102010042721 A 20101020
- EP 2011054835 W 20110329

Abstract (en)

[origin: WO2012052191A1] The present invention relates to a starting material for producing a sintered connection. In order to avoid the formation of cracks in the joining partners in the case of fluctuating thermal loading, the starting material comprises second particles 20 in addition to metallic first particles 10, wherein the second particles 20 at least proportionately contain a particle core material which has a coefficient of thermal linear expansion α at 20°C which is less than the coefficient of thermal linear expansion α at 20°C of the metal or of the metals of the first particles in metallic form, and wherein the D50 value of the second particles 20 is greater than or equal to half the D50 value of the first particles 10 and less than or equal to two times the D50 value of the first particles 10. In addition, the present invention relates to a corresponding sintered connection 100', to an electronic circuit 70 and also to a process for forming a thermally and/or electrically conductive sintered connection.

IPC 8 full level

B22F 1/18 (2022.01); **C22C 32/00** (2006.01); **H01B 1/22** (2006.01)

CPC (source: EP US)

B22F 1/18 (2022.01 - EP US); **B23K 35/0244** (2013.01 - EP US); **B23K 35/24** (2013.01 - EP US); **B32B 15/043** (2013.01 - US);
C22C 32/0021 (2013.01 - EP US); **H01B 1/02** (2013.01 - EP US); **H05K 1/0271** (2013.01 - US); **H05K 13/0465** (2013.01 - US);
H01L 2224/29 (2013.01 - EP US); **H01L 2224/293** (2013.01 - EP US); **H01L 2224/29311** (2013.01 - EP US); **H01L 2224/29339** (2013.01 - EP US);
H01L 2224/29347 (2013.01 - EP US); **H01L 2224/29386** (2013.01 - EP US); **H01L 2224/294** (2013.01 - EP US);
H01L 2224/29439 (2013.01 - EP US); **H01L 2224/29464** (2013.01 - EP US); **H01L 2224/29469** (2013.01 - EP US);
H01L 2224/29486 (2013.01 - EP US); **H01L 2224/8384** (2013.01 - EP US); **H01L 2924/00013** (2013.01 - EP US);
H01L 2924/01006 (2013.01 - EP US); **H01L 2924/01021** (2013.01 - EP US); **H01L 2924/01037** (2013.01 - EP US);
H01L 2924/01055 (2013.01 - EP US); **H01L 2924/01074** (2013.01 - EP US); **H01L 2924/01078** (2013.01 - EP US);
H01L 2924/01079 (2013.01 - EP US); **Y10T 403/477** (2015.01 - EP US); **Y10T 428/12069** (2015.01 - EP US)

Citation (search report)

See references of WO 2012052191A1

Citation (examination)

EP 1749600 A1 20070207 - MITSUI MINING & SMELTING CO [JP]

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)

WO 2012052191 A1 20120426; EP 2629910 A1 20130828; EP 2630267 A1 20130828; EP 2630267 B1 20200722; US 2013216848 A1 20130822;
US 2013251447 A1 20130926; WO 2012052192 A1 20120426

DOCDB simple family (application)

EP 2011054835 W 20110329; EP 11713483 A 20110329; EP 11713484 A 20110329; EP 2011054845 W 20110329;
US 201113880709 A 20110329; US 201113880956 A 20110329