

Title (en)
NiFe binder with universal application

Title (de)
NiFe-Binder mit universeller Einsetzbarkeit

Title (fr)
Liant NiFe ayant une application universelle

Publication
EP 2527480 B1 20170503 (DE)

Application
EP 11167901 A 20110527

Priority
EP 11167901 A 20110527

Abstract (en)
[origin: EP2527480A1] The process comprises providing a dispersion comprising a composition, which comprises a hardness carrier and a base binder alloy comprising nickel (70-90 wt.%), iron (7-34 wt.%), cobalt (less than 5 wt.%) and molybdenum (less than 0.02 wt.%), in a solvent, grinding the dispersion, producing a powder by drying the dispersion, preparing powder compacts by pressing or by extrusion of the powder using plasticizing agents, and sintering the powder compacts. The base binder alloy has a weight ratio of iron:nickel of 1:4-1:7, and is present as an alloy powder. An independent claim is included for a sintered composite material.

IPC 8 full level
C22C 29/00 (2006.01); **B22F 1/105** (2022.01); **C22C 29/06** (2006.01)

CPC (source: EP KR US)
B22F 1/105 (2022.01 - EP KR US); **C22C 19/00** (2013.01 - EP US); **C22C 29/00** (2013.01 - EP KR US); **C22C 29/005** (2013.01 - EP US); **C22C 29/06** (2013.01 - EP KR US); **C22C 29/067** (2013.01 - EP US); **C22C 38/08** (2013.01 - EP US)

Citation (opposition)
Opponent : Sandvik Machining Solutions AB
• JP S4990612 A 19740829
• CN 101560623 A 20091021 - UNIV SOUTH CHINA TECH [CN]
• WO 2006119522 A1 20061116 - BOEHLERIT GMBH & CO KG [AT], et al
• US 2010239855 A1 20100923 - GRIES BENNO [DE], et al
• US 6554885 B1 20030429 - MENDE BERND [DE], et al
• US 2002112896 A1 20020822 - KRUSE OLOF [SE], et al
• FERNANDES ET AL.: "Mechanical characterization of composites prepared from WC powders coated with Ni rich binders", INTERNATIONAL JOURNAL OF REFRACTORY METALS & HARD MATERIALS, vol. 26, no. 5, 2008, pages 491 - 498, XP022701532

Cited by
EP4421196A1; WO2024179883A1

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)
EP 2527480 A1 20121128; EP 2527480 B1 20170503; CN 103562422 A 20140205; CN 103562422 B 20160210; ES 2628422 T3 20170802; IL 229654 A0 20140130; IL 229654 B 20181231; JP 2014519553 A 20140814; JP 6124877 B2 20170510; KR 102079325 B1 20200219; KR 20140032414 A 20140314; PL 2527480 T3 20171229; RU 2013158048 A 20150710; RU 2623545 C2 20170627; US 11207730 B2 20211228; US 2014086782 A1 20140327; US 2018029118 A1 20180201; US 9821372 B2 20171121; WO 2012163804 A1 20121206

DOCDB simple family (application)
EP 11167901 A 20110527; CN 201280025581 A 20120524; EP 2012059748 W 20120524; ES 11167901 T 20110527; IL 22965413 A 20131127; JP 2014513132 A 20120524; KR 20137032074 A 20120524; PL 11167901 T 20110527; RU 2013158048 A 20120524; US 201214122246 A 20120524; US 201715730747 A 20171012