Title (en)
HARDMETAL MATERIALS FOR HIGH-TEMPERATURE APPLICATIONS

Title (de)
HARTMETALLMATERIALIEN FÜR HOCHTEMPERATURANWENDUNGEN

Title (fr)
MATERIAUX A BASE DE METAUX DURS POUR APPLICATIONS A HAUTE TEMPERATURE

Publication
EP 1922427 A2 20080521 (EN)

Application
EP 06813610 A 20060821

Priority
• US 2006032654 W 20060821
• US 71001605 P 20050819

Abstract (en)
[origin: WO2007022514A2] Hardmetal compositions each including hard particles having a first material and a binder matrix having a second, different material comprising rhenium or a Ni-based superalloy. Tungsten may also be used a binder matrix material. A two-step sintering process may be used to fabricate such hardmetals at relatively low sintering temperatures in the solid-state phase to produce substantially fully-densified hardmetals. A hardmetal coating or structure may be formed on a surface by using a thermal spray method.

IPC 8 full level
C22C 29/02 (2006.01); **C22C 1/05** (2006.01); **C22C 29/08** (2006.01); **C22C 29/14** (2006.01); **C22C 29/16** (2006.01)

CPC (source: EP KR)
C22C 29/005 (2013.01 - EP); **C22C 29/04** (2013.01 - KR); **C22C 29/14** (2013.01 - KR); **C22C 29/16** (2013.01 - KR); B22F 2998/00 (2013.01 - EP); B22F 2998/10 (2013.01 - EP)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
WO 2007022514 A2 20070222; **WO 2007022514 A3 20080807**; AU 2006280936 A1 20070222; BR PI0615027 A2 20110426; CA 2617945 A1 20070222; CN 101316941 A 20081203; EP 1922427 A2 20080521; EP 1922427 A4 20090318; IL 189288 A0 20080605; JP 2009504926 A 20090205; KR 20080053468 A 20080613

DOCDB simple family (application)
US 2006032654 W 20060821; AU 2006280936 A 20060821; BR PI0615027 A 20060821; CA 2617945 A 20060821; CN 200680038569 A 20060821; EP 06813610 A 20060821; IL 18928808 A 20080205; JP 2008527214 A 20060821; KR 20087006457 A 20080317