

Title (en)
HIGH DENSITY TUNGSTEN MATERIAL SINTERED AT LOW TEMPERATURE

Title (de)
HOCHDICHTES, BEI NIEDRIGEN TEMPERATUREN GESINTERTES MATERIAL AUS WOLFRAM

Title (fr)
MATERIAU TUNGSTENE A HAUTE DENSITE FRITTE A BASSE TEMPERATURE

Publication
EP 1206585 B1 20030502 (FR)

Application
EP 00953219 A 20000615

Priority
• FR 0001656 W 20000615
• FR 9908186 A 19990625

Abstract (en)
[origin: WO0100892A1] The invention concerns a tungsten-based sintered material, with relative mean density higher than 93 % and HV0.3 hardness ≥ 400 . It comprises: tungsten having a purity higher than 99.9 %, an additive consisting of nickel and/or cobalt powder in a mass percentage not more than 0.08 %, an average particle size of tungsten grains of equiaxial shape ranging between 2 and 40 μm and uniformly distributed for a given average size; and uniformly distributed residual porosity with less than 85 % of the population of pores having a unit volume less than 4 μm^3 .

IPC 1-7
C22C 1/04; **B22F 3/10**

IPC 8 full level
B22F 3/10 (2006.01); **C22C 1/04** (2006.01); **C22C 27/04** (2006.01); **F27D 1/00** (2006.01); **F27B 14/10** (2006.01)

CPC (source: EP US)
B22F 3/10 (2013.01 - EP); **C22C 1/045** (2013.01 - EP US); **C22C 27/04** (2013.01 - EP); **F27D 1/0006** (2013.01 - EP); **B22F 2998/10** (2013.01 - EP); **F27B 14/10** (2013.01 - EP)

C-Set (source: EP US)
B22F 2998/10 + **B22F 1/09** + **B22F 3/02** + **B22F 3/10**

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 0100892 A1 20010104; AT E239100 T1 20030515; AU 6574800 A 20010131; CA 2377773 A1 20010104; DE 60002476 D1 20030605; DE 60002476 T2 20040909; EP 1206585 A1 20020522; EP 1206585 B1 20030502; FR 2795430 A1 20001229; FR 2795430 B1 20020322; IL 147192 A0 20020814

DOCDB simple family (application)
FR 0001656 W 20000615; AT 00953219 T 20000615; AU 6574800 A 20000615; CA 2377773 A 20000615; DE 60002476 T 20000615; EP 00953219 A 20000615; FR 9908186 A 19990625; IL 14719200 A 20000615