

Title (en)
PROCESS FOR MANUFACTURING HARD METAL PARTS

Title (de)
VERFAHREN ZUR HERSTELLUNG VON HARTMETALLBAUTEILEN

Title (fr)
PROCEDE DE FABRICATION DE PIECES EN METAL DUR

Publication
EP 0869857 B1 20010307 (DE)

Application
EP 96942363 A 19961205

Priority
• DE 19546901 A 19951215
• EP 9605452 W 19961205

Abstract (en)
[origin: DE19546901C1] The invention relates to the field of the ceramic and hard metal industries and concerns a process for manufacturing hard metal parts, in particular those having a complex geometry, such as those used for example as machining tools and wear elements. The object of the invention is to create a process which allows the manufacture of hard metal parts with a complex geometry by using a stable dispersed hard metal-binder suspension, in which the binder is a thermoplastic binder having a viscosity of 3 to 6 mPas, and without using an organic solvent to eliminate the binder. For that purpose, a process is disclosed wherein a hard metal powder having an average corn size smaller than 2.0 μm is mixed with a liquefied thermoplastic binder, the viscosity of the mixture being set upon a value of at least 100 mPas and up to 4000 mPas during the whole production and treatment process. The thus obtained stable disperse suspension is shaped into a moulded body from which the thermoplastic binder is then expelled and the binder-free shaped body is then sintered.

IPC 1-7
B22F 3/22; **C22C 1/05**

IPC 8 full level
B22F 3/22 (2006.01); **C22C 1/05** (2006.01)

CPC (source: EP US)
B22F 3/225 (2013.01 - EP US); **C22C 1/051** (2013.01 - EP US)

Designated contracting state (EPC)
DE FR GB IT LU SE

DOCDB simple family (publication)
DE 19546901 C1 19970424; DE 59606559 D1 20010412; EP 0869857 A1 19981014; EP 0869857 B1 20010307; US 5972286 A 19991026; WO 9722427 A1 19970626

DOCDB simple family (application)
DE 19546901 A 19951215; DE 59606559 T 19961205; EP 9605452 W 19961205; EP 96942363 A 19961205; US 9109698 A 19980626