

Title (en)

PROCESS FOR PREPARING A SINTERED HARD METAL, AND SINTERED HARD METAL OBTAINED THEREBY

Publication

**EP 0330913 B1 19930512 (DE)**

Application

**EP 89102623 A 19890216**

Priority

DE 3806602 A 19880302

Abstract (en)

[origin: US4944800A] A sintered hard metal body having improved heat resistance and higher cutting performance is produced by a process including mixing together at least one hard substance, at least one binder material, and at least one of at least one complex carbide and at least one complex nitride to form a starting mixture each constituent of which is in powdered form. The at least one hard substance is selected from the group consisting of carbides, nitrides, and carbonitrides of transition metals of Groups IVB, VB and VIB of the Periodic Table of Elements, is present as at least one of a carbide, a mixed carbide, a nitride, a mixed nitride, a carbonitride, and a mixed carbonitride, and has a cubic crystal form. The at least one binder metal is selected from the group including iron, nickel and cobalt. The starting mixture is then ground and compressed into a predetermined shape, followed by sintering to melt the at least one binder metal and decompose the complex carbide and/or complex nitride to form at least one of at least one transition metal carbide and at least one transition metal nitride which grows on the surface of the at least one hard substance in powdered form and forms a diffusion inhibiting layer thereon.

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IPC 8 full level

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CPC (source: EP US)

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