

Title (en)

Cemented carbide, coated cemented carbide member and production processes of the same

Title (de)

Hartmetall, beschichtetes Hartmetallteil und Verfahren zu dessen Herstellung

Title (fr)

Carbure cimenté, pièce en carbure cimenté revêtue et son procédé de fabrication

Publication

EP 1630242 B1 20081001 (EN)

Application

EP 04090325 A 20040824

Priority

EP 04090325 A 20040824

Abstract (en)

[origin: EP1630242A1] A cemented carbide comprises a binder phase consisting essentially of an iron family metal, a first hard phase consisting essentially of WC having a hexagonal crystal structure, and a second hard phase consisting essentially of one or more types of a compound of a metal or metals of group 4, 5 or 6 of the periodic table having an NaCl-type cubic crystal structure. The cemented carbide is formed by a surface region with a thickness of 2 to 50 µm consisting of the binder phase and the first hard phase, and an inner region present underneath the surface region consisting of the binder phase, the first hard phase and the second hard phase. A ratio of an average grain size of the first hard phase in the surface region to an average grain size of the first hard phase in the inner region is 1 or less, and a ratio of an area of the binder phase in the surface region to an area of the binder phase in the inner region is greater than 1.

IPC 8 full level

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CPC (source: EP)

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