

Title (en)

COMPOSITE DIAMOND-ABRASIVE PRODUCT, PROCESS FOR MANUFACTURING IT AND DRILLING OR FINISHING TOOLS PROVIDED THEREWITH

Publication

**EP 0317452 B1 19910814 (FR)**

Application

**EP 88420383 A 19881116**

Priority

FR 8716140 A 19871117

Abstract (en)

[origin: EP0317452A1] This abrasive product is of the type in which the active part consists of a sintered product comprising grains of diamond, each grain being linked directly to its neighbouring grains by bridging in order to have a polycrystalline structure, associated with a support essentially consisting of tungsten carbide. <??>According to the invention, the tungsten carbide support comprises a chromium binder phase representing from 6 to 15% by volume of the carbide; the relative proportions by weight of nickel and chromium in the binder phase vary within a range from 60 to 90% and from 40 to 100%. <??>The process for manufacturing this product consists: - in placing in a crucible a layer of grains of diamond which is intended to constitute the active layer of the product; - in placing on the layer thus formed a layer of tungsten carbide to which a nickel-chromium mixture is added, intended to constitute the support; - in subjecting the layer arrangement thus formed to a temperature and a pressure which are sufficient to cause the plastic-phase sintering of the grains of diamond and to bind the compact thus obtained to the support. <??>Drilling or machining tools equipped with the composite diamond- impregnated abrasive product according to the invention.

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**B24D 3/00; B24D 3/06**

IPC 8 full level

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