

Title (en)

Diamond-containing materials and a method of making products from the same.

Title (de)

Diamant enthaltende Materialien und Verfahren zur Herstellung von Produkten daraus.

Title (fr)

Matériaux contenant des diamants et méthode pour produire des produits de ceux-ci.

Publication

EP 0459474 A1 19911204 (EN)

Application

EP 91108843 A 19910529

Priority

US 53247890 A 19900601

Abstract (en)

A composite material includes a multitude of diamond particles that are embedded in and interconnected by a matrix of a metallic material to form a solid body having a very high stiffness to weight ratio. A product having a very high stiffness to weight ratio is made by mixing diamond particles with a particulate metallic material to obtain a mixture having a predetermined ratio of the diamond particles to the metallic material. A quantity of this mixture is then confined in an enclosed space which is then evacuated. Thereafter, the quantity of the mixture confined in the evacuated enclosed space is subjected to temperature and pressure conditions sufficient to cause the metallic material to form a matrix embedding and interconnecting the diamond particles to form a solid body therewith.

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C22C 26/00

IPC 8 full level

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CPC (source: EP)

C22C 21/00 (2013.01); **C22C 23/00** (2013.01); **C22C 26/00** (2013.01)

Citation (search report)

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- [X] PATENT ABSTRACTS OF JAPAN vol. 12, no. 165 (C-496)(3012) May 18, 1988 & JP-A-62 274 044 (SUMITOMO ELECTRIC IND. LTD.) November 28, 1987
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