

Title (en)

Method for making solid composite material particularly metal matrix with ceramic dispersates.

Title (de)

Verfahren zur Herstellung von Verbundwerkstoff, insbesondere eine Metallmatrix mit dispergierten Keramikteilchen.

Title (fr)

Procédé d'obtention d'un matériau composite, particulièrement une matrice métallique avec une dispersion céramique.

Publication

EP 0346771 B1 19941026 (EN)

Application

EP 89110482 A 19890609

Priority

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- US 20808688 A 19880617

Abstract (en)

[origin: EP0346771A1] Composites of materials in which the matrix material does not spontaneously or readily wet the disperse phase and in which the volume fraction of the disperse phase is less than that formed in a packed bed of dispersate particles can be made effectively by an indirect method of infiltrating a packed bed of dispersate particles, using pressure or other mechanical force as needed to overcome poor wetting and form an intermediate concentrated composite. The concentrated composite is then mixed with additional matrix-forming material to produce the finally desired composite. The technique is particularly valuable for composites with ceramic dispersates and metal or alloy matrixes. When the matrix is predominantly aluminum and the dispersates are predominantly silicon carbide, a barrier coating of a material that retards reaction between silicon carbide and alumina is useful.

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C22C 1/10

IPC 8 full level

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CPC (source: EP KR)

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Cited by

US5441697A; US6635357B2; EP0671478A3; US5381850A; TR25639A; EP0577381A1; US5336291A; EP2954083A4; US9945012B2; WO9117276A3

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