

Title (en)

Composite material including silicon nitride whisker type short fiber reinforcing material and aluminum alloy matrix metal with moderate copper and magnesium contents.

Title (de)

Verbundwerkstoff mit kurzen Siliziumnitridfasern des Typs der versetzungsfreien Einkristalle als Verstärkungselement und eine Matrix, bestehend aus einer Aluminiumlegierung mit geringem Kupfer- und Magnesiumgehalt.

Title (fr)

Matériau composite comportant des fibres courtes de nitrure de silicium, du type monocristallin sans dislocations, comme matériau de renforcement et une matrice métallique d'un alliage d'aluminium avec des teneurs en cuivre et en magnésium peu élevées.

Publication

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Application

EP 87101468 A 19870204

Priority

JP 2453986 A 19860206

Abstract (en)

A composite material is made from silicon nitride whisker type short fiber material embedded in a matrix of metal. The matrix metal is an alloy consisting essentially of from approximately 2% to approximately 6% of copper, from approximately 0.5% to approximately 3% of magnesium, and remainder substantially aluminum. The fiber volume proportion of the silicon nitride type short fibers is between approximately 5% and approximately 50%, and may more desirably be between approximately 5% and approximately 40%. The magnesium content of the aluminum alloy matrix metal may desirably be between approximately 0.5% and approximately 2.5%. And, in the desirable case that the fiber volume proportion of the silicon nitride whisker type short fiber material is between approximately 30% and approximately 40%, then the copper content of the aluminum alloy matrix metal is desired to be between approximately 2% and approximately 5%.

IPC 1-7

C22C 1/09

IPC 8 full level

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