

Title (en)
METHOD OF PRODUCING A METAL MATRIX COMPOUND MATERIAL

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES METALLMATRIX-VERBUNDWERKSTOFFS

Title (fr)
PROCÉDÉ DE FABRICATION D'UNE MATRÈRE ACTIVE COMPOSITE À MATRICE MÉTALLIQUE

Publication
EP 2437904 A1 20120411 (DE)

Application
EP 10724291 A 20100527

Priority
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Abstract (en)
[origin: EP2261397A1] The method for producing a metal matrix composite material, comprises a metal matrix having metal component, and a reinforcing component arranged in the metal matrix. One of the components is sprayed onto a substrate (5) by a thermal spraying process, where the reinforcing component consists of carbon in the form of nanotubes, nanofibers, graphenes, fullerence, flakes or diamond. The spraying process is cold gas spraying, flame spraying and/or plasma spraying. The substrate is a film, a substrate with non-wettable surface, workpiece to be coated, and/or a semi-finished product. The method for producing a metal matrix composite material, comprises a metal matrix having metal component, and a reinforcing component arranged in the metal matrix. One of the components is sprayed onto a substrate (5) by a thermal spraying process, where the reinforcing component consists of carbon in the form of nanotubes, nanofibers, graphenes, fullerence, flakes or diamond. The spraying process is cold gas spraying, flame spraying and/or plasma spraying. The substrate is a film, a substrate with non-wettable surface, workpiece to be coated, a semi-finished product and/or three-dimensional structure. The surface of the substrate and/or the metal-matrix composite material is processed. The metal component and/or reinforcing component are provided in particle form. A first component is mixed before the spraying with a further component. The reinforcing component is organic and/or ceramic reinforcing component. An independent claim is included for a metal matrix-composite material.

IPC 8 full level
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C23C 4/06 (2013.01 - EP US); **C23C 4/129** (2016.01 - EP US); **C23C 4/134** (2016.01 - EP US); **C23C 24/04** (2013.01 - EP KR US);
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