

Title (en)

Method and apparatus for single die composite production.

Title (de)

Verfahren und Vorrichtung zur Herstellung eines MMC (Metall-Matrix-Komposites) mit nur einer Form.

Title (fr)

Procédé et dispositif pour la fabrication de MMC (Matériaux Métalliques Composites) avec un moule unique.

Publication

EP 0608595 A1 19940803 (EN)

Application

EP 93300688 A 19930129

Priority

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Abstract (en)

A method for producing composite materials by forming one material (29) in a die cavity (14) such that another material (38) can be forced into the same die cavity and infiltrate the spaces in the first material. A method for producing a composite comprising the steps of injecting reinforcement material in a binder or suspension into a die cavity (14); burning off or removing the binder or suspension such that the reinforcement material remains in the die cavity; injecting liquid metal into the same die cavity (14) such that it infiltrates the reinforcement material; solidifying the liquid metal; and removing the metal infiltrated composite material from the die cavity. An apparatus comprised of a die and a die cavity disposed inside the die. The apparatus is also comprised of a first port (16) extending from the die cavity to the surface of the die through which reinforcement material in a binder is injected into a die cavity. Additionally, the apparatus is comprised of a second port (20) extending from the die cavity to the surface of the die through which liquid metal is injected into the same die cavity. <IMAGE>

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CPC (source: EP)

B22D 19/02 (2013.01); **B22D 19/14** (2013.01); **C22C 1/1036** (2013.01)

Citation (search report)

- [XE] US 5183096 A 19930202 - COOK ARNOLD J [US]
- [X] US 3547180 A 19701215 - COCHRAN CHARLES NORMAN, et al
- [X] WO 8302782 A1 19830818 - SECR DEFENCE BRIT [GB]

Designated contracting state (EPC)

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