

Title (en)  
METHOD FOR MANUFACTURING A HOLLOW PART MADE OF METAL MATRIX OR CERAMIC MATRIX COMPOSITE REINFORCED WITH SHORT FIBERS

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINES HOHLEN TEILS AUS MIT KURZEN FASERN VERSTÄRKTER METALLMATRIX ODER KERAMIKMATRIXVERBUNDSTOFF

Title (fr)  
PROCEDE DE FABRICATION D'UNE PIECE CREUSE EN MATERIAU COMPOSITE A MATRICE METALLIQUE OU CERAMIQUE RENFORCEE AVEC DES FIBRES COURTES

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Application  
**EP 21810068 A 20211012**

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Abstract (en)  
[origin: WO2022084602A1] The invention relates to a method for manufacturing a hollow part made of metal matrix or ceramic matrix composite, comprising the following steps: • - preparing a raw material (30) comprising at least short fibers and a ceramic matrix or metal matrix precursor charge, • - positioning a sacrificial core (10) in a molding cavity (23) of injection-molding equipment (20), the molding cavity having dimensions larger than the dimensions of the sacrificial core, • - shaping the raw material (30) by injection molding said raw material into the free space (230) between the sacrificial core (10) and an internal wall of the molding cavity so as to obtain a green part comprising the sacrificial core and the shaped raw material, • - extracting the green part from the injection-molding equipment (20), • - densifying the raw material (30) by flash sintering of the green part so as to transform the charge into a ceramic matrix or into a metal matrix, • - removing or eliminating the sacrificial core (10) so as to obtain a hollow part made of ceramic matrix or metal matrix composite, • wherein the sacrificial core is coated with a flexible graphite sheet, with a graphite layer deposited by spraying or with a boron nitride paint layer before the step of injecting the raw material.

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