

Title (en)
METHOD FOR MANUFACTURING A REINFORCED BI-METALLIC CASTING COMPOSITE AND APPARATUS FOR MANUFACTURING A REINFORCED BI METALLIC CASTING COMPOSITE

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES VERSTÄRKTEN BIMETALLISCHEN GIESSVERBUNDES UND VORRICHTUNG ZUR HERSTELLUNG EINES VERSTÄRKTEN BIMETALLISCHEN GIESSVERBUNDES

Title (fr)
PROCÉDÉ DE FABRICATION D'UN COMPOSITE DE COULÉE BI-MÉTALLIQUE RENFORCÉ ET APPAREIL DE FABRICATION D'UN COMPOSITE DE COULÉE BI-MÉTALLIQUE RENFORCÉ

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Abstract (en)
A method for manufacturing a reinforced bi-metallic casting composite is provided, wherein at least one metallic insert (2) is provided in a die (3) and a metal over casting step is performed, wherein, by means of said metal over-casting step, an over-cast metal (14) is casted at least partly over said at least one metallic insert (2). The method comprises the following steps: a) providing said at least one metallic insert (2) being in a preformed condition; b) introducing said at least one metallic insert (2) being in its preformed condition into said die (3); c) holding said at least one metallic insert (2) being in its preformed condition in a predetermined position in said die (3); d) performing a closing operation of said die by means of a closing element (9); e) performing a deformation operation, wherein, by means of said deformation operation, said at least one metallic insert (2) being in its preformed condition is deformed from its preformed condition into a casting condition; f) performing said metal over-casting step, wherein said over-cast metal (14) is casted at least partly over said at least one metallic insert (2) being in its casting condition; g) solidification of said over-cast metal (14); and h) extracting said at least one metallic insert (2) together with said over cast metal (14) from said die (3). An apparatus (1) for manufacturing a reinforced bi-metallic casting composite, preferably for performing said method, is also provided, comprising: a die (3), wherein said die comprises a moulding cavity (4); and a closing element (9) being movable in a closing direction (8) for closing said moulding cavity (4). The apparatus (1) further comprises: at least one actuator (11; 5) being adapted to perform a deformation operation to a metallic insert (2) when being arranged inside of said moulding cavity (4), wherein said at least one actuator (11; 5) is a mechanical actuator, a hydraulic actuator, a pneumatic actuator, a magnetic actuator or an electric actuator.

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