

Title (en)  
METHOD OF AND INSTALLATION FOR PRODUCING FIBER REINFORCED METAL PIECES

Publication  
**EP 0275426 B1 19911023 (DE)**

Application  
**EP 87117752 A 19871201**

Priority  
DE 3701218 A 19870117

Abstract (en)  
[origin: EP0275426A2] The direct transfer of the vacuum die-casting technique in cold-chamber die-casting machines used for the manufacture of unreinforced castings to the manufacture of fibre-reinforced castings involves serious disadvantages. As a result of the arrangement of the vacuum connection above the mould cavity, the gases present in the melt container and in the filling chamber are drawn right through the mould cavity when the melt is drawn in. Gas residues can therefore remain in the inserted fibrous body and lead to the formation of gas bubbles or shrink holes in the casting. There is also a risk of, for example, lubricant vapours or highly volatile alloy constituents condensing on the fibres. This impedes the wetting of the fibres with the molten metal, and the achievable bonding strength is thus markedly reduced. These disadvantages are to be avoided by the novel process. According to the process of the invention, the vacuum connection is arranged in the region of the casting run (8) between the filling chamber (1) and the mould cavity (7). Residual gases from the filling chamber (1) are thus extracted before they pass into the mould cavity (7), the fibrous moulding being degassed at the same time. This prevents any contamination of the fibres, so that high bonding strengths are achieved. Vacuum die-casting of fibre-reinforced aluminium castings.

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Cited by  
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