

Title (en)

Investment casting method yielding cast articles with enhanced surface finish

Title (de)

Feingiessverfahren zur Erzeugung von Gegenständen mit sehr präziser Oberfläche

Title (fr)

Procédé de coulée de précision donnant des objets à état de surface de haute précision

Publication

EP 0747149 A2 19961211 (EN)

Application

EP 96304194 A 19960606

Priority

US 48104995 A 19950607

Abstract (en)

A modified investment casting process is provided which allows cast articles having a smooth surface finish to be obtained while using casting patterns made of a photocurable liquid polymer by a stereolithography process, or by molded thermoplastic materials. Moreover, the process of the invention eliminates or minimizes the incidence of mold cracking due to expansion of the casting pattern. The process involves first preparing a casting pattern through a stereolithography process or through molding a thermoplastic material. Thereafter, a wax or wax like coating is applied to the casting pattern and an investment assembly is prepared. A mold is obtained from the investment assembly by first subjecting the investment assembly to a first temperature range sufficient to melt and extract the wax or wax like material, leaving behind the casting pattern. Thereafter, the investment assembly is subjected to an elevated temperature in a second temperature range that is sufficient to melt and extract the casting pattern. <IMAGE>

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IPC 8 full level

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