

Title (en)  
WAXLESS PRECISION CASTING PROCESS

Title (de)  
WACHSLOSES FEINGUSSVERFAHREN

Title (fr)  
PROCÉDÉ DE COULÉE À LA CIRE PERDUE SANS CIRE

Publication  
**EP 2509727 B1 20190501 (EN)**

Application  
**EP 10793385 A 20101208**

Priority  
• US 26771709 P 20091208  
• US 96162110 A 20101207  
• US 2010059377 W 20101208

Abstract (en)  
[origin: US2011132562A1] Alloy products are produced with a waxless casting process. A model of a ceramic casting vessel (34) defining a desired product shape is digitally divided into sections (10, 40, 42). Each section is translated into a soft alloy mater tool (14) including precision inserts (20) where needed for fine detail. A flexible mold (24) is cast from each master tool, and a section of the ceramic casting vessel is cast from the respective flexible mold. The vessel sections are assembled by aligning cooperating precision features (58, 60) cast directly into each section and the alloy part is cast therein. No wax or wax pattern tooling is needed to produce the cast alloy product. Engineered surface features (54) may be included on both the interior and exterior surfaces of the shell sections.

IPC 8 full level  
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CPC (source: EP US)  
**B22C 7/06** (2013.01 - EP US); **B22C 9/02** (2013.01 - EP US); **B22C 9/04** (2013.01 - US); **B22C 9/10** (2013.01 - US);  
**B22C 9/103** (2013.01 - EP US); **B22C 9/22** (2013.01 - US); **B22C 9/24** (2013.01 - EP US)

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