

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
B22C 9/02 (2006.01); **B22C 9/10** (2006.01); **B22C 9/24** (2006.01)

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)

Citation (examination)
EP 1790823 A2 20070530 - UNITED TECHNOLOGIES CORP [US]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
US 2011132562 A1 20110609; EP 2509727 A2 20121017; EP 2509727 B1 20190501; EP 3552732 A1 20191016; US 2014241938 A1 20140828;
WO 2011071974 A2 20110616; WO 2011071974 A3 20110922

DOCDB simple family (application)
US 96162110 A 20101207; EP 10793385 A 20101208; EP 19172041 A 20101208; US 2010059377 W 20101208; US 201414268391 A 20140502