Title (en)

Modular ceramic casting core and casting method

Title (de)

Modularer keramischer Gusskern und Gussverfahren

Title (fr)

Noyau de fonderie en céramique modulaire et procédé de coulée

Publication

EP 2463044 A1 20120613 (DE)

Application

EP 10194298 A 20101209

Priority

EP 10194298 A 20101209

Abstract (en)

The ceramic casting core (4) comprises two separate parts (5, 6), which are assembled into one part. The casting core has a high aspect ratio and a longitudinal direction, which represents the longest extent of the aspect ratio. The parts of the core are joined together in a plane, in which the longitudinal direction runs. The plane is as large as possible. The parts comprise elevations and complementarily shaped depressions located into separating surfaces (22, 22') between the parts, where the elevations and depressions intervene into each other in the assembled state. The ceramic casting core (4) comprises two separate parts (5, 6), which are assembled into one part. The casting core has a high aspect ratio and a longitudinal direction, which represents the longest extent of the aspect ratio. The parts of the core are joined together in a plane, in which the longitudinal direction runs. The plane is as large as possible. The parts comprise: elevations and complementarily shaped depressions located into separating surfaces (22, 22') between the parts, where the elevations and depressions intervene into each other in the assembled state; and a gap arranged between the parts in the assembled state, where the longitudinal direction runs in the gap. An inner partition wall of a cast component results during the casting. A part of the elevations and a part of the depressions comprise spacers, which engage with each other in the assembled state. The gap and/or the separating surfaces parallely extend between the parts to a tangent of an outer surface of the core for a turbine blade, where no gap is formed between the separate parts. The gap or separating surfaces lie in a plane, on which the longitudinal direction is vertical. An independent claim is included for a method of casting a turbine blade.

Abstract (de)

Der vorgeschlagene keramische Gusskern weist im Unterschied zum Stand der Technik zwei Teile (5, 6) auf, um die Teile(5, 6) separat herstellen zu können, damit diese besser und filigraner hergestellt werden können.

IPC 8 full level

B22C 9/10 (2006.01)

CPC (source: EP)

B22C 9/103 (2013.01)

Citation (applicant)

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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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2463044 A1 20120613

DOCDB simple family (application)

EP 10194298 A 20101209