

Title (en)

A compound for producing foundry moulds and cores

Title (de)

Verbindung zur Herstellung von Gussformen und -kernen

Title (fr)

Composé pour la fabrication de moules et de noyaux de fonderie

Publication

EP 2823913 A1 20150114 (EN)

Application

EP 13425098 A 20130708

Priority

EP 13425098 A 20130708

Abstract (en)

A compound for manufacturing through rapid prototyping foundry moulds and cores which can be used for melting metallic alloys castings comprising a structural base component made of granular inert material and at least one binder suitable to increase the mechanical strength of said structural base component in respect to the hydrostatic pressure of the molten metallic alloy. In particular, the compound comprises at least one hygroscopic component suitable to at least partly absorb the humidity present in said structural base component, at least one reactant suitable to react with the oxygen present into the mould upon contact with the molten metallic alloy in order to trigger a combustion and at least one catalyst suitable to reduce the starting time of the combustion of said at least one reactant and increase the propagation rate of the combustion.

IPC 8 full level

B22C 1/22 (2006.01)

CPC (source: EP)

B22C 1/2246 (2013.01); **B22C 1/2253** (2013.01)

Citation (applicant)

- US 6155331 A 20001205 - LANGER HANS [DE], et al
- ZITIAN FAN: "Investigation on casting mold (or core) making with coated sand by the selective laser sintering", CHINA FOUNDRY JOURNAL
- CASALINO: "An investigation of rapid prototyping of sand casting molds by selective laser sintering", LASER INSTITUTE OF AMERICA

Citation (search report)

- [XD] US 6155331 A 20001205 - LANGER HANS [DE], et al
- [A] EP 1864728 A1 20071212 - ASAHI ORGANIC CHEM IND [JP], et al
- [A] WO 2004110719 A2 20041223 - EDERER INGO [DE], et al
- [XD] ZITIAN FAN; NAIYU HUANG; YAN LI; ZHILI LIU: "Investigation on casting mold (or core) making with coated sand by the selective laser sintering", CHINA FOUNDRY JOURNAL, vol. 1, no. 2, November 2004 (2004-11-01), pages 122 - 126, XP002685544, ISSN: 1672-6421
- [XD] CASALINO G; DE FILIPPIS L A C; LUDOVICO A D; TRICARICO L: "An investigation of rapid prototyping of sand casting molds by selective laser sintering", JOURNAL OF LASER APPLICATIONS, LASER INSTITUTE OF AMERICA, vol. 14, no. 2, May 2002 (2002-05-01), pages 100 - 106, XP002685545, ISSN: 1042-346X
- [A] RONG CHENG ET AL: "The Optimization Design Study of Selective Laser Sintering Process Parameters on the Pro-Coated Sand Mold", APPLIED MECHANICS AND MATERIALS, TRANS TECH PUBL, CH, vol. 55-57, May 2011 (2011-05-01), pages 853 - 858, XP009163867, ISSN: 1660-9336

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 2823913 A1 20150114

DOCDB simple family (application)

EP 13425098 A 20130708