

Title (en)

MOLD MATERIAL FOR CASTING AND COPPER ALLOY MATERIAL

Title (de)

FORMWERKSTOFF FÜR GUSS UND KUPFERLEGIERUNGSMATERIAL

Title (fr)

MATÉRIAU DE MOULE POUR COULÉE ET MATÉRIAU D'ALLIAGE DE CUIVRE

Publication

EP 3715488 A4 20210331 (EN)

Application

EP 18881052 A 20180928

Priority

- JP 2017223760 A 20171121
- JP 2018036324 W 20180928

Abstract (en)

[origin: US2020215604A1] A casting mold material used when casting a metal material includes, as a composition: Cr within a range of 0.3 mass % or more and 0.7 mass % or less; Zr within a range of 0.025 mass % or more and 0.15 mass % or less; Sn within a range of 0.005 mass % or more and 0.04 mass % or less; P within a range of 0.005 mass % or more and 0.03 mass % or less; and a balance consisting of Cu and inevitable impurities, in which a Zr content [Zr] (mass %) and a P content [P] (mass %) have a relationship of $[Zr]/[P] \geq 5$, and a Sn content [Sn] (mass %) and a P content [P] (mass %) have a relationship of $[Sn]/[P] \leq 5$.

IPC 8 full level

C22C 9/00 (2006.01); **B22D 11/059** (2006.01); **C22F 1/08** (2006.01)

CPC (source: EP KR US)

B22D 11/059 (2013.01 - EP KR US); **C22C 9/00** (2013.01 - EP KR US); **C22F 1/08** (2013.01 - EP KR US)

Citation (search report)

- [X] JP H0593230 A 19930416 - TOSHIBA CORP
- [A] US 2017292181 A1 20171012 - YANO SHOICHIRO [JP], et al
- [A] WO 2016047484 A1 20160331 - MITSUBISHI MATERIALS CORP [JP]
- [A] WO 2017081972 A1 20170518 - MITSUBISHI MATERIALS CORP [JP]
- [A] WO 2017065071 A1 20170420 - MITSUBISHI MATERIALS CORP [JP]
- See also references of WO 2019102716A1

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 2020215604 A1 20200709; CN 111212923 A 20200529; CN 111212923 B 20211214; EP 3715488 A1 20200930; EP 3715488 A4 20210331; JP 2019094530 A 20190620; JP 7035478 B2 20220315; KR 102486303 B1 20230106; KR 20200087123 A 20200720; WO 2019102716 A1 20190531

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US 201816648061 A 20180928; CN 201880066982 A 20180928; EP 18881052 A 20180928; JP 2017223760 A 20171121; JP 2018036324 W 20180928; KR 20207008276 A 20180928