

Title (en)
CASTING PRODUCT HAVING ALUMINA BARRIER LAYER

Title (de)
GIESSPRODUKT MIT ALUMINIUMOXIDSPERRSCHICHT

Title (fr)
PRODUIT DE FONDERIE AYANT UNE COUCHE BARRIÈRE EN ALUMINE

Publication
EP 3124645 B1 20191023 (EN)

Application
EP 14887198 A 20141217

Priority

- JP 2014067836 A 20140328
- JP 2014083417 W 20141217

Abstract (en)
[origin: EP3124645A1] The present invention provides a cast product that can further enhance the stability of an alumina barrier layer and can exhibit further superior oxidation resistance, carburization resistance, nitriding resistance, corrosion resistance, and the like when used under a high-temperature atmosphere. The cast product according to the present invention is a cast product having an alumina barrier layer including an aluminum oxide on a surface of a matrix, and the aluminum oxide is $(Al(1-x)M(x))_2O_3$, where M is at least one of Cr, Ni, Si, and Fe, and x satisfies a relationship $0 < x < 0.5$. Furthermore, the cast product according to the present invention is a cast product having an alumina barrier layer including an aluminum oxide on a surface of a matrix, and at least one of Cr, Ni, Si, and Fe forms a solid solution in the aluminum oxide, and at least one of Cr, Ni, Si, and Fe forming the solid solution with Al is contained so as to satisfy a relationship $Al/(Cr+Ni+Si+Fe) \geq 2.0$ in an atomic % ratio.

IPC 8 full level
C21D 9/14 (2006.01); **C22C 19/05** (2006.01); **C22C 30/00** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/06** (2006.01); **C22C 38/44** (2006.01); **C22C 38/48** (2006.01); **C22C 38/50** (2006.01); **C22C 38/54** (2006.01); **C23C 8/14** (2006.01); **C23C 8/80** (2006.01)

CPC (source: EP US)
C21D 9/14 (2013.01 - EP US); **C22C 19/05** (2013.01 - EP US); **C22C 19/055** (2013.01 - EP US); **C22C 19/056** (2013.01 - EP US); **C22C 30/00** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/44** (2013.01 - EP US); **C22C 38/48** (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **C22C 38/54** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US); **C22F 1/00** (2013.01 - EP US); **C23C 8/10** (2013.01 - US); **C23C 8/14** (2013.01 - EP US); **C23C 8/80** (2013.01 - EP US); **B22D 13/02** (2013.01 - EP US); **C21D 1/68** (2013.01 - EP US); **C21D 1/70** (2013.01 - EP US); **C21D 6/004** (2013.01 - EP US); **C21D 2251/02** (2013.01 - EP US); **C22F 1/10** (2013.01 - EP US)

Citation (opposition)
Opponent : Schmidt + Clemens GmbH + Co. KG

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- DE 2837122 A1 19790927 - POMPEY ACIERIES
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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

DOCDB simple family (publication)
EP 3124645 A1 20170201; **EP 3124645 A4 20171101**; **EP 3124645 B1 20191023**; CA 2940179 A1 20151001; CA 2940179 C 20220920; CA 3167432 A1 20151001; CN 106460144 A 20170222; CN 106460144 B 20190115; ES 2765349 T3 20200608; JP 2015190005 A 20151102; JP 6247977 B2 20171213; US 2017306468 A1 20171026; WO 2015145896 A1 20151001

DOCDB simple family (application)
EP 14887198 A 20141217; CA 2940179 A 20141217; CA 3167432 A 20141217; CN 201480077579 A 20141217; ES 14887198 T 20141217; JP 2014067836 A 20140328; JP 2014083417 W 20141217; US 201415116738 A 20141217