

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
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CPC (source: EP US)
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Citation (opposition)
Opponent : Schmidt + Clemens GmbH + Co. KG

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- DE 2837122 A1 19790927 - POMPEY ACIERIES
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