Title (en)

Corrosion-resistant and heat-resistant metal composite and method of producing.

Title (de)

Korrosionsbeständiger und wärme beständiger Metall-Verbundwerkstoff und Verfahren zu seiner Herstellung.

Title (fr)

Matériau métallique composite résistant à la corrosion et à la chaleur et son procédé de fabrication.

Publication

EP 0480404 A2 19920415 (EN)

Application

EP 91117218 A 19911009

Priority

- JP 7776391 A 19910410
- JP 13425891 A 19910605
- JP 27162790 A 19901009

Abstract (en)

A metal composit is prepared by covering at least a part of the surface of a substrate, typically a sheet of an Fe-based alloy or steel with Al or an Al-alloy dirctly or with an intermediate layer of Ni, annealing the covered material under vacuum or in an inert gas atmosphere, and heating in an oxidizing atmosphere to form an internal layer of inermetallic compouds and a surface portecting layer of Al2O3. In case of direct covering with Al or Al-alloy,there will occur intermetallic compounds, Fe3Al and/or FeAl, and in case of using an Ni sheet as the intermediate layer, intermetallic compounds, Ni3Al and/or NiAl Nb may be used in place of Ni. As the substrate, Ni or a Ni-alloy containing more than 20 weight % of Ni may be used. The substrate may be in the form of wire The product metal composit has improved high temperature corrosion resistance and chemical resistance as wee as good processability, and is paticularly useful for electric heater material and catalyst carrier of automobile exhaust gas cleaners.

IPC 1-7

B23K 20/16; B23K 20/233; C23C 28/00

IPC 8 full level

C23C 26/00 (2006.01); **C23C 28/00** (2006.01)

CPC (source: EP)

C23C 26/00 (2013.01); **C23C 28/321** (2013.01); **C23C 28/345** (2013.01)

Cited by

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