

Title (en)

High temperature corrosion resistant composite coatings.

Title (de)

Hochtemperatur-korrosionsbeständige zusammengesetzte Beschichtungen.

Title (fr)

Revêtements composites résistant à la corrosion à haute température.

Publication

EP 0587341 A1 19940316 (EN)

Application

EP 93306699 A 19930824

Priority

GB 9218858 A 19920905

Abstract (en)

A multiplex protective MCrAlY-based coating system for an M-based superalloy base material, where M is at least one of iron, cobalt and nickel, has a surface layer containing aluminides of platinum and the M constituent of the coating. There may be a single surface layer (Fig. 2) containing platinum modified aluminide, or alternatively a double surface layer (Fig.3) in the form of a top layer containing platinum modified aluminide and a sub-surface layer containing aluminides substantially without platinum modification. The surface layer may also have extra chromium in solid solution in the M constituent of the coating, the total chromium content in the surface layer of the coating being not more than about 40 wt.%, preferably 35 to 40 wt.%. The process for production of such a system involves deposition of an MCrAlY coating, optionally chromising it, and then aluminising and platinising it using appropriate amounts of platinum and appropriate heat treatments to obtain the desired variant of the coating system. Alternatively, to boost aluminium levels near the surface, the coating can be platinised immediately before it is aluminised.

IPC 1-7

C23C 28/02; **C23C 30/00**

IPC 8 full level

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CPC (source: EP)

C23C 10/58 (2013.01); **C23C 28/022** (2013.01); **C23C 28/028** (2013.01)

Citation (search report)

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- [A] US 5141821 A 19920825 - LUGSCHEIDER ERICH [DE], et al
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