

Title (en)

Alloys for high temperature applications, articles made therefrom, and method for repair of articles

Title (de)

Legierungen für Verwendung bei hohen Temperaturen, daraus hergestellte Gegenstände und Verfahren zum Reparieren von Gegenständen

Title (fr)

Alliages pour mise en oeuvre aux températures élevées, articles fabriqués avec cette alliage et procédé pour la réparation d'articles

Publication

EP 1505165 A1 20050209 (EN)

Application

EP 04254572 A 20040730

Priority

US 63640703 A 20030807

Abstract (en)

An alloy for use in high temperature applications is presented. The alloy comprises, in atom percent, at least about 50% rhodium (Rh); at least about 5% of a metal selected from the group consisting of platinum (Pt), palladium (Pd), and combinations thereof; from about 5% to about 24% ruthenium (Ru); and from about 1% to about 40% chromium (Cr); wherein the alloy comprises less than about 50% by volume of an A3-structured phase, and wherein the quantity defined by the expression ($\bar{A}Cr\bar{U} + 2\bar{A}Ru\bar{U}$) is in the range from about 25% to about 50%, where $\bar{A}Ru\bar{U}$ and $\bar{A}Cr\bar{U}$ are the atom percentages of ruthenium and chromium in the alloy, respectively. Articles comprising the alloy and methods employing the alloy for repairing articles are also presented.

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