

Title (en)

PROCESS FOR APPLYING THERMAL BARRIER COATINGS TO METALS AND RESULTING PRODUCT.

Title (de)

VERFAHREN ZUM AUFBRINGEN THERMISCHER ABSCHLIESSSCHICHTEN AUF METALLE UND SO ENTSTANDENE ERZEUGNISSE.

Title (fr)

PROCEDE POUR APPLIQUER DES REV TEMENTS DE BARRIERE THERMIQUE SUR DES METAUX ET PRODUIT RESULTANT.

Publication

EP 0140889 A4 19860213 (EN)

Application

EP 83902322 A 19830513

Priority

US 48774583 A 19830422

Abstract (en)

[origin: WO8404335A1] Process for applying a protective coating to a metal substrate which provides a thermal barrier and a barrier against oxidation of the substrate. The coating material is a mixture of (1) zirconium and/or hafnium and (2) a metal such as nickel which does not form a stable oxide at a high temperature in an atmosphere having a very low concentration of oxygen. The coating is subjected to such conditions to produce an outer oxide layer of metal zirconium and/or hafnium and an inner metal layer of the second metal alloyed with one or more components of the substrate. The oxide layer provides thermal and oxidation protection and the inner layer bonds the coating to the substrate.

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C23F 7/02

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [A] GB 1194600 A 19700610 - GEN ELECTRIC & ENGLISH ELECT [GB]
- [A] GB 1195904 A 19700624 - COMINCO LTD [CA]
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- [A] US 2269601 A 19420113 - RENE PERRIN
- [E] GB 2110721 A 19830622 - STANFORD RES INST INT
- [A] PATENTS ABSTRACTS OF JAPAN, vol. 4, no. 106 (C-20)[588], 30th July 1980; & JP-A-55 069 250 (TOKYO SHIBAURA DENKI K.K.) 24-05-1980
- [A] CHEMICAL ABSTRACTS, vol. 98, 1983, page 285, abstract 130944v, Columbus, Ohio, US; & US-A-375 784 (UNITED STATES NATIONAL AERONAUTICS AND SPACE ADMINISTRATION) 03-12-1982

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