

Title (en)

METHOD AND COMPOSITION FOR DIFFUSION ALLOYING OF FERROUS MATERIALS

Title (de)

VERFAHREN UND ZUSAMMENSETZUNG ZUM DIFFUSIONSLEGIEREN VON EISENHALTIGEN MATERIALIEN

Title (fr)

COMPOSITION ET PROCEDE D'ALLIAGE PAR DIFFUSION DE MATERIAUX FERREUX

Publication

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Application

EP 97911922 A 19971023

Priority

- US 9719278 W 19971023
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Abstract (en)

[origin: WO9818978A1] A method for diffusion coating workpieces of ferrous base metals such as carbon steel and cast iron includes the step of weighing and mixing the following components, in powdered form: Chromium 40-50 wt.%, Ferrochromium 25-37 wt.%, Tantalum Carbide 0.40-0.65 wt.%, Vanadium 0.35-0.70 wt.%, Ammonium Halide 4-5 wt.%, Aluminum Oxide remainder. The workpieces are preferably degreased and then placed in a container with the mixed components. The container is sealed and heated to a temperature of 1000-1050 DEG C. The workpieces and the composition are kept at that temperature for a predetermined period, on the order of forty-five minutes or longer, to permit a surface layer of desired thickness to form. The container is then cooled in a conventional cooling chamber and the workpieces are removed. The method produces coatings having good wear and corrosion resistance.

IPC 1-7

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CPC (source: EP)

C22C 32/0026 (2013.01); **C23C 10/30** (2013.01); **C23C 10/32** (2013.01)

Citation (search report)

- [A] GB 906884 A 19620926 - DEUTSCHE EDELSTAHLWERKE AG
- [A] US 4099993 A 19780711 - MULLER HERMANN, et al
- [A] GB 1070158 A 19670524 - DEUTSCHE EDELSTAHLWERKE AG
- See references of WO 9818978A1

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