

Title (en)  
PROCESS FOR PRODUCING A PROTECTIVE COATING ON METAL WALLS SUBJECT TO ATTACK BY HOT GASES, ESPECIALLY FLUE GASES

Title (de)  
VERFAHREN ZUR HERSTELLUNG EINER SCHUTZSCHICHT AUF MIT HEISSEN GASEN, INSBESONDERE RAUCHGASEN BEAUFSCHLAGTEN METALLISCHEN WÄNDEN

Title (fr)  
PROCEDE DE FABRICATION D'UNE COUCHE DE PROTECTION SUR DES PAROIS METALLIQUES SOUMISES A L'INFLUENCE DE GAZ CHAUDS, NOTAMMENT DE GAZ BRULES

Publication  
**EP 0672197 B1 19990331 (DE)**

Application  
**EP 93912953 A 19930611**

Priority  
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• EP 9301483 W 19930611

Abstract (en)  
[origin: WO9400616A1] A process for producing a protective coating on walls subject to attack by hot gases in a predetermined temperature range, which are made of metal and a predetermined basic material, in combustion plants, heat exchangers or similar installations, in which a powder of metallic, carbide, oxycarbide or silicide materials or mixtures thereof are applied to the metal walls using the plasma jet process. The invention proposes that: a) the surface of the wall is roughened; b) the basic material of the wall is activated; and c) immediately afterwards the powder is applied at room temperature and in atmospheric conditions by the plasma jet process; being d) the composition of the powder selected beforehand so that the stress as a function of the temperature in the unstressed state (at room temperature) found with the aid of the coefficients of heat expansion of the basic material and test-pieces for the transition region between the basic material and the applied coating produced from various powders gives tensile stresses of between 50 and 800 N/mm<sup>2</sup> and preferably between 500 and 800 N/mm<sup>2</sup>, which is reduced to 0 or exhibits slight compression stresses in the predetermined temperature range.

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**C23C 4/04; C23C 4/02**

IPC 8 full level  
**C23C 4/02** (2006.01); **C23C 4/04** (2006.01); **C23C 4/12** (2016.01)

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**B05B 7/22** (2013.01 - KR); **C23C 4/02** (2013.01 - EP); **C23C 4/10** (2013.01 - KR); **C23C 4/12** (2013.01 - EP); **C23C 4/134** (2016.01 - KR)

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Cited by  
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**WO 9400616 A1 19940106**; AT E178364 T1 19990415; AU 4325093 A 19940124; AU 672009 B2 19960919; BR 9306566 A 19990112; CA 2138255 A1 19940106; CZ 313794 A3 19950816; DE 4220063 C1 19931118; DE 59309491 D1 19990506; EP 0672197 A1 19950920; EP 0672197 B1 19990331; ES 2132237 T3 19990816; JP 3150697 B2 20010326; JP H08501350 A 19960213; KR 950701983 A 19950517; PL 171965 B1 19970731; RU 2107744 C1 19980327; RU 94046201 A 19961020; SK 156394 A3 19970205

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