Title (en)
METHOD FOR CLEANING METALLIC SURFACES

Title (de)
VERFAHREN ZUR REINIGUNG VON METALLOBERFLÄCHEN

Title (fr)
PROCEDE DE NETTOYAGE DE SURFACES METALLIQUES

Publication
EP 1114196 B1 20020502 (DE)

Application
EP 99942869 A 19990813

Priority
• DE 19840778 A 19980907
• EP 9905960 W 19990813

Abstract (en)
[origin: WO0014289A1] When metallic parts are annealed in an inert low-hydrogen atmosphere, carbon deposits often remain on the surface of said parts. The inventive method and device allow for controlled dampening of the dry inert low-hydrogen atmosphere and transformation of carbon deposits into volatile carbon oxides. Said method and device provide a soot-free annealing process and substantially prevent any mass transfer with the material.

IPC 1-7
C21D 9/67; C21D 1/76

IPC 8 full level
C21D 1/76 (2006.01); **C21D 9/67** (2006.01); **C23G 5/00** (2006.01)

CPC (source: EP)
C21D 1/76 (2013.01); **C23G 5/00** (2013.01)

Citation (examination)
• US 5569339 A 19961029 - SCHEUERMANN WALTER [DE]
• DE 4241746 C1 19940825 - MESSER GRIESHEIM GMBH [DE]
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• F. Neumann, "Methoden zum Messen und Regeln von Aufkohlungs- atmosphären unter besonderer Berücksichtigung des Sauerstoffpotentials", in HTM 44, (1989), 5, pages 261 - 269
• T. H. Sanderson, "Steam Atmosphere Heat Treatment, in Heat Treatment of Metals", 1975.4, p. 109 - 112
• R. R. Judd et al., "Effect and Importance of Controlled and Annealing Atmosphere on Magnetic Properties of Lamination Steels", in Heat Treatment of Metals, 1995.4, p. 83 - 88
• EN 746-3

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
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