

Title (en)  
PROCESS FOR FORMING FE<sub>2</sub>B LAYERS ON ARTICLES OF FERROUS ALLOYS

Publication  
**EP 0076488 B1 19880323 (DE)**

Application  
**EP 82109090 A 19821001**

Priority  
DE 3139462 A 19811003

Abstract (en)  
[origin: EP0076488A2] 1. Process for the production of Fe<sub>2</sub>B coatings on iron-based alloy workpieces in a heated reaction chamber to which BCl<sub>3</sub> (boron trichloride) as boron-containing gas is fed together with H<sub>2</sub> gas as carrier gas, characterized in that, as a further carrier gas, N<sub>2</sub> gas under atmospheric pressure is fed to the gas mixture in the reaction chamber and, in a first treatment stage, an amount of BCl<sub>3</sub> gas which is less than 5% of the gas mixture in the furnace atmosphere is selected for rapid build-up of an iron boride coating, with an FeB coating on the surface and an Fe<sub>2</sub>B coating thereunder, and, in a second, immediately subsequent treatment stage, the thickness of the FeB coating is substantially reduced using a lower concentration of BCl<sub>3</sub> in the furnace atmosphere, or a concentration which is approaching zero.

IPC 1-7  
**C23C 8/08**; **C23C 8/70**

IPC 8 full level  
**C23C 8/08** (2006.01); **C23C 8/70** (2006.01)

CPC (source: EP)  
**C23C 8/08** (2013.01)

Citation (examination)  
Härterei Technische Mitteilungen 39 (1984) S. 7-15

Designated contracting state (EPC)  
AT CH DE FR GB IT LI NL SE

DOCDB simple family (publication)  
**EP 0076488 A2 19830413**; **EP 0076488 A3 19840822**; **EP 0076488 B1 19880323**; AT E33152 T1 19880415; DE 3139462 A1 19830421; DE 3278266 D1 19880428

DOCDB simple family (application)  
**EP 82109090 A 19821001**; AT 82109090 T 19821001; DE 3139462 A 19811003; DE 3278266 T 19821001