

Title (en)

Vacuum furnace for plasma carburization of metallic workpieces.

Title (de)

Vakuumofen zur Plasmaaufkohlung metallischer Werkstücke.

Title (fr)

Four sous vide pour la carburisation de pièces métalliques par plasma.

Publication

**EP 0535319 B1 19950614 (DE)**

Application

**EP 92112630 A 19920723**

Priority

DE 4132712 A 19911001

Abstract (en)

[origin: EP0535319A1] A vacuum furnace for plasma carburisation of metallic workpieces in an artificially generated electric field by means of a carbon-containing gas comprises an electric heating device (11), a vacuum pump (24) for producing a vacuum in the heating chamber (6) and gas inlet orifices (9) by means of which a cooling gas delivered by a fan (22) and passed through a heat exchanger (21) is fed to the charge (7). To obtain a vacuum furnace of smaller constructional size than that of known vacuum furnaces, the furnace casing (1) in the form of a pressure vessel is designed with respect to its permissible pressure loading for a pressure of at least 10 bar, as is the drive (4) of the fan (22) with respect to the gas pressure which can be reached on cooling of the charge (7). In addition, the gas inlet orifices (9) bearing the cooling gas are located in the heating chamber (6) and point to the charge (7). <IMAGE>

IPC 1-7

**C23C 8/36**; **C21D 1/673**

IPC 8 full level

**C21D 1/673** (2006.01); **C23C 8/36** (2006.01); **C23C 8/38** (2006.01)

CPC (source: EP)

**C23C 8/38** (2013.01)

Cited by

CN103557710A; DE10157840C1; EP0869189A1; CN108870983A; CN104296524A; EP1318696A1; EP0778463A1; US5876118A; US6794618B2; KR20190112541A; KR20180077729A; US10815543B2

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