

Title (en)

METHOD AND DEVICE FOR HEATING METAL COMPONENTS USING ELECTRON IRRADIATION IN A VACUUM CHAMBER

Title (de)

VERFAHREN UND EINRICHTUNG ZUM ERWÄRMEN VON METALLBAUTEILEN MIT ELEKTRONENBESTRAHLUNG IN EINER VAKUUMKAMMER

Title (fr)

PROCEDE ET DISPOSITIF POUR CHAUFFER DES COMPOSANTS METALLIQUES PAR IRRADIATION AVEC DES ELECTRONS DANS UNE CHAMBRE SOUS VIDE

Publication

**EP 1129223 A2 20010905 (DE)**

Application

**EP 99960771 A 19990930**

Priority

- DE 9903235 W 19990930
- DE 19845804 A 19980930

Abstract (en)

[origin: WO0018985A2] The invention relates to a method for heating metal components using electron irradiation in a vacuum chamber. In order to uniformly heat the metal components in all areas thereof, the invention provides that multilayer holding elements (6) are used for holding the metal components (3) in the vacuum chamber (1). Said holding elements are provided with a layer (9) which faces the electron irradiation, which is resistant to heat and which exhibits good heat absorbing properties. The holding elements are also provided with an inner layer (10) which faces the respective metal component (3) and which exhibits good heat radiating properties. The invention also relates to a device for heating metal components which comprises multilayer holding elements (6). Said holding elements each comprise an outer layer (9) which exhibits absorbing properties and an inner layer (10) which exhibits good heat radiating properties.

IPC 1-7

**C21D 1/34**; **C21D 9/00**; **F28F 13/18**

IPC 8 full level

**G21K 5/04** (2006.01); **B23K 15/00** (2006.01); **C21D 1/34** (2006.01); **C21D 9/00** (2006.01); **C23C 28/00** (2006.01); **C23C 30/00** (2006.01); **F28F 13/18** (2006.01); **G21K 5/08** (2006.01); **H05B 1/00** (2006.01); **B23K 103/08** (2006.01); **B23K 103/10** (2006.01)

CPC (source: EP US)

**H05B 1/00** (2013.01 - EP US)

Citation (search report)

See references of WO 0018985A2

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)

**WO 0018985 A2 20000406**; **WO 0018985 A3 20000525**; DE 19845804 A1 20000531; DE 19845804 C2 20001130; DE 59901522 D1 20020627; EP 1129223 A2 20010905; EP 1129223 B1 20020522; JP 2003521376 A 20030715; US 2001030177 A1 20011018; US 6469273 B2 20021022

DOCDB simple family (application)

**DE 9903235 W 19990930**; DE 19845804 A 19980930; DE 59901522 T 19990930; EP 99960771 A 19990930; JP 2000572428 A 19990930; US 82194301 A 20010330