

Title (en)

Process and device for heat treating workpieces

Title (de)

Verfahren und Vorrichtung zur Wärmebehandlung von Teilen

Title (fr)

Procédé et dispositif pour le traitement thermique de pièces

Publication

EP 1006202 A3 20030806 (DE)

Application

EP 99122351 A 19991110

Priority

DE 19856191 A 19981205

Abstract (en)

[origin: EP1006202A2] Heat treatment process, comprises preheating workpieces (11) in air prior to homogenization annealing under protective gas and martensitic quench hardening. A heat treatment process, preferably for steel workpieces, comprises preheating the workpieces (11) in air at below their transformation temperature (preferably ≥ 300 , especially 400-600 degrees C), homogenization annealing under protective gas at above the transformation temperature (preferably above the steel eutectoid temperature of 723 degrees C) and then martensitic hardening in a quenching bath (19). An Independent claim is also included for an installation for carrying out the above process.

IPC 1-7

C21D 1/18; **C21D 1/22**; **C21D 1/63**; **C21D 9/00**; **C21D 1/26**; **C21D 9/40**; **F27D 5/00**

IPC 8 full level

C21D 1/18 (2006.01); **C21D 1/26** (2006.01); **C21D 9/00** (2006.01); **C21D 1/63** (2006.01); **C21D 1/74** (2006.01); **C21D 9/40** (2006.01)

CPC (source: EP)

C21D 1/18 (2013.01); **C21D 1/26** (2013.01); **C21D 9/0062** (2013.01); **C21D 1/63** (2013.01); **C21D 1/74** (2013.01); **C21D 9/40** (2013.01)

Citation (search report)

- [Y] US 5456773 A 19951010 - BITTNER HANS-GEORG [DE], et al
- [Y] DE 19647248 A1 19980520 - ALD AICHELIN GMBH [DE]
- [Y] DE 3919199 A1 19901220 - SKF GMBH [DE]
- [A] DE 4007852 C1 19910529

Cited by

CN104313259A; CN109252039A; CN116219142A; WO2008055477A3

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)

EP 1006202 A2 20000607; **EP 1006202 A3 20030806**; DE 19856191 A1 20000615; DE 19856191 C2 20010215

DOCDB simple family (application)

EP 99122351 A 19991110; DE 19856191 A 19981205