

Title (en)  
METHOD FOR QUENCHING STEEL IN PRESSURIZED AIR

Title (de)  
VERFAHREN ZUM ABSCHRECKEN VON STAHL MITTELS DRUCKLUFT

Title (fr)  
PROCEDE DE TREMPE DES ACIERS A L'AIR PRESSION

Publication  
**EP 1404882 A1 20040407 (FR)**

Application  
**EP 02751278 A 20020620**

Priority  
• FR 0202152 W 20020620  
• FR 0108175 A 20010621

Abstract (en)  
[origin: US2005000597A1] The method for quenching a steel charge after carburizing or carbonitriding is carried out at atmospheric pressure and comprises the following steps: the charge is extracted from a treatment furnace (1) at a temperature ranging from 750 ° C. to 1100 ° C.; b) the charge is transferred to a quenching cell (3); c) a quenching fluid is introduced at a pressure which is higher than atmospheric pressure; d) the charge is cooled to a temperature of less than 400 ° C. According to the invention, the fluid is primarily composed of air, and the part is brought to a temperature of at least 400 ° C., whereby an oxide layer preventing decarburization is formed in the time period starting from the moment when the charge exits (1) from the furnace.

IPC 1-7  
**C21D 9/00**; **C21D 1/62**; **C21D 1/613**

IPC 8 full level  
**C21D 1/613** (2006.01); **C21D 1/62** (2006.01); **C21D 9/00** (2006.01)

CPC (source: EP US)  
**C21D 1/613** (2013.01 - EP US); **C21D 1/62** (2013.01 - EP US); **C21D 9/0062** (2013.01 - EP US)

Citation (search report)  
See references of WO 03000939A1

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

DOCDB simple family (publication)  
**US 2005000597 A1 20050106**; AT E350497 T1 20070115; CN 1289695 C 20061213; CN 1545564 A 20041110; DE 60217344 D1 20070215; DE 60217344 T2 20071025; EP 1404882 A1 20040407; EP 1404882 B1 20070103; FR 2826374 A1 20021227; FR 2826374 B1 20031003; MX PA03012026 A 20050701; WO 03000939 A1 20030103

DOCDB simple family (application)  
**US 48148904 A 20040730**; AT 02751278 T 20020620; CN 02816385 A 20020620; DE 60217344 T 20020620; EP 02751278 A 20020620; FR 0108175 A 20010621; FR 0202152 W 20020620; MX PA03012026 A 20020620