

Title (en)

Method and apparatus for heat treating material

Title (de)

Verfahren und Vorrichtung zum Wärmebehandeln von Werkstücken

Title (fr)

Procédé et dispositif pour le traitement thermique de pièces

Publication

EP 1316622 A3 20040714 (EN)

Application

EP 02258205 A 20021128

Priority

US 68318501 A 20011129

Abstract (en)

[origin: EP1316622A2] An apparatus 100 for quenching a material F includes a support 107 for receiving the material; and an outlet 131 adjacent the support 107 for impinging a fluid against a first section of the material. The apparatus 100 increases a cooling rate of the first section relative to a cooling rate of a second section of the material, preferably minimizing a differential between the cooling rate of the first section and the cooling rate of the second section. <IMAGE>

IPC 1-7

C21D 1/667; **C21D 9/00**; **C21D 1/613**; **F27B 5/16**

IPC 8 full level

C21D 1/18 (2006.01); **C21D 1/667** (2006.01); **C21D 9/00** (2006.01); **C22F 1/00** (2006.01); **C22F 1/10** (2006.01)

CPC (source: EP US)

C21D 1/667 (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C22F 1/10** (2013.01 - EP US); **C21D 2221/00** (2013.01 - EP US)

Citation (search report)

- [XP] US 6394793 B1 20020528 - BUNGE GENE [US]
- [XY] US H777 H 19900501
- [Y] US 5452882 A 19950926 - WUNNING JOACHIM [DE]
- [A] EP 1108793 A1 20010620 - BOC GROUP PLC [GB]

Cited by

EP1498500A3; EP1498500A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

EP 1316622 A2 20030604; **EP 1316622 A3 20040714**; **EP 1316622 B1 20081008**; AT E410526 T1 20081015; DE 60229199 D1 20081120; JP 2003221617 A 20030808; RU 2002131905 A 20040520; US 2003098106 A1 20030529

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