

Title (en)

Heat treatment of steel elements in fluidized beds.

Title (de)

Wärmebehandlung von Stahlgegenständen in Wirbelbetten.

Title (fr)

Traitement thermique d'éléments d'acier dans des lits fluidisés.

Publication

EP 0195473 A1 19860924 (EN)

Application

EP 86200330 A 19860304

Priority

GB 8505491 A 19850304

Abstract (en)

In the heat treatment of steel wires (W) in a patenting operation, the wires from an austenitizing furnace (1) are first quenched in a fluidized bed (Q). This bed (Q) is fluidized by hot gases from the furnace (1) and is also provided with a cooling system (28). The wires are then passed into a second fluidized bed (TR-S) where transformation takes place. This bed is fluidized by an independent source of hot gas (21) and is divided into regions (13) along its length which have independently controllable auxiliary heaters (14). The temperatures in the zone (Q) and the region (13) along zone (TR-S) are controlled to give a fine pearlite microstructure in the wire.

IPC 1-7

C21D 9/64; **C21D 9/567**

IPC 8 full level

C21D 9/52 (2006.01); **C21D 9/56** (2006.01); **C21D 9/567** (2006.01); **C21D 9/64** (2006.01)

CPC (source: EP KR)

C21D 9/567 (2013.01 - EP); **C21D 9/64** (2013.01 - EP KR)

Citation (search report)

- [X] US 3718024 A 19730227 - VITELLI V
- [AD] DE 2032643 A1 19710114
- [A] FR 1541674 A 19681011 - SCHLOEMANN AG
- [A] FR 2066203 A5 19710806 - CENTRE NAT RECH METALL
- [A] US 3666253 A 19720530 - YOSHIO YURI, et al
- [A] US 4168995 A 19790925 - ERDODI GYORGY, et al
- [A] AU 487892 A
- [A] PATENTS ABSTRACTS OF JAPAN, vol. 1, no. 54 (C-77) [497], 25th May 1977, page 497 C 77; & JP - A - 52 16 414 (SHIN NIPPON SEITETSU K.K.) 02-07-1977

Cited by

EP1520741A3; EP0620284A3; TR27825A; CN113502436A; EP0410501A1; BE1004383A3; FR2717825A1; GB2246793A; GB2246793B; EP0329611A1; CH675257A5; US5705228A; EP1078994A3; EP4109087A1; US7648191B2; WO2008009009A3; KR100312438B1; WO2022268507A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0195473 A1 19860924; **EP 0195473 B1 19891206**; AT E48444 T1 19891215; AU 5389686 A 19860911; AU 591652 B2 19891214; BR 8600916 A 19861111; CA 1270427 A 19900619; CN 86101334 A 19861119; CZ 149186 A3 19930217; CZ 281967 B6 19970416; DD 250550 A5 19871014; DE 3667301 D1 19900111; ES 552641 A0 19870216; ES 8703528 A1 19870216; GB 8505491 D0 19850403; IN 166412 B 19900505; JP S61276938 A 19861206; KR 860007391 A 19861010; KR 930009977 B1 19931013; SK 280378 B6 19991210; SU 1500167 A3 19890807; TR 22844 A 19880822; ZA 861595 B 19861029

DOCDB simple family (application)

EP 86200330 A 19860304; AT 86200330 T 19860304; AU 5389686 A 19860224; BR 8600916 A 19860304; CA 502852 A 19860227; CN 86101334 A 19860303; CS 149186 A 19860304; DD 28755286 A 19860304; DE 3667301 T 19860304; ES 552641 A 19860304; GB 8505491 A 19850304; IN 139DE1986 A 19860220; JP 4717586 A 19860304; KR 860001493 A 19860304; SK 149186 A 19860304; SU 4027089 A 19860303; TR 13286 A 19860304; ZA 861595 A 19860304