

Title (en)

METHOD OF CASE-HARDENING METALLIC PIECES

Publication

EP 0049531 B1 19850605 (DE)

Application

EP 81108035 A 19811007

Priority

DE 3038082 A 19801008

Abstract (en)

[origin: EP0049531A1] 1. A method of case-hardening metallic workpieces, in which the latter are subjected to the action of a carbon-containing gas atmosphere at high temperatures in a furnace, in which gas atmosphere pressure fluctuations are produced, characterised in that the gas atmosphere is formed from at least two components and the pressure fluctuations are produced by the pulsating charging into the furnace of at least two components having different amplitudes and frequencies of pressure fluctuations for the individual gas components.

IPC 1-7

C23C 8/20; **C23C 8/22**

IPC 8 full level

C23C 8/06 (2006.01); **C23C 8/20** (2006.01); **C23C 8/22** (2006.01)

CPC (source: EP)

C23C 8/06 (2013.01); **C23C 8/22** (2013.01)

Cited by

EP0213991A1; FR2586259A1; US4769090A; EP0080124B1

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0049531 A1 19820414; **EP 0049531 B1 19850605**; AT A539780 A 19820415; AU 542462 B2 19850221; AU 6915581 A 19820422; BR 8102151 A 19820817; DE 3038082 A1 19820506; DE 3170867 D1 19850711; DK 433081 A 19820409; ES 505892 A0 19820901; ES 8206641 A1 19820901; NO 813284 L 19820413; ZA 812499 B 19820428

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EP 81108035 A 19811007; AT 539780 A 19801103; AU 6915581 A 19810407; BR 8102151 A 19810409; DE 3038082 A 19801008; DE 3170867 T 19811007; DK 433081 A 19810930; ES 505892 A 19810930; NO 813284 A 19810928; ZA 812499 A 19810415