Title (en)

Method and device for heat treating metallic materials in a protective atmosphere

Title (de)

Verfahren und Einrichtung zur Wärmebehandlung von metallischen Werkstoffen unter Schutzgasatmosphäre

Title (fr)

Procédé et dispositif destinés au traitement à chaud de matières métalliques sous atmosphère protectrice

Publication

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Application

EP 09007348 A 20090603

Previously filed application

102008029001 20080620 DE

Priority

DE 102008029001 A 20080620

Abstract (en)

[origin: CN101608294A] The present invention includes a protective gas recirculation system for carburizing material gas in an industrial furnace (1), and a method and a device thereof, wherein components of carbon dioxide, oxygen and water vapour are reacted with an input reacting gas to generate carbon monoxide and hydrogen, such that the "used" protective gas is used as the protective gas recovered in a recoveringspace (3) to be supplied for one or more positions (2.2) in a processing space (2.1) to form a real cyclic process, and the gas carburization may be implemented continuously by saving the protective gas.

IPC 8 full level

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CPC (source: EP US)

C21D 1/763 (2013.01 - EP US); **C21D 1/773** (2013.01 - EP US); **C21D 11/00** (2013.01 - EP US); **C23C 8/20** (2013.01 - EP US)

Citation (search report)

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- [Y] DE 4427507 C1 19950601 - LINDE AG [DE]
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Designated extension state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

DE 102008029001 A 20080620; CN 200910146224 A 20090622; EP 09007348 A 20090603; JP 2009139871 A 20090611; PL 09007348 T 20090603; RU 2009123209 A 20090618; US 48734009 A 20090618