

Title (en)
Gas carburizing.

Title (de)
Gasaufkohlung.

Title (fr)
Carburation par gaz.

Publication
EP 0040023 A1 19811118 (EN)

Application
EP 81301882 A 19810428

Priority
GB 8014712 A 19800502

Abstract (en)
Carrier gases formed by the reaction of rich mixtures of hydrocarbon and air and heretofore considered unsuitable for gas carburizing can be used for gas carburizing if introduced into the heat treatment chamber (4) at or below a specified flow rate. This flow rate is inversely proportional to the amount of CO₂ and H₂O present in the carrier gas and can be increased by, for example, removing H₂O from the gas. The invention has particular commercial value since it enables exothermic gas generators (8) to be used for providing carrier gas for gas carburizing with excellent control of the carbon potential by monitoring the reacted furnace atmosphere and making hydrocarbon additions in the usual way. Three forms of apparatus are also described which may be used for producing suitable carrier gases in the heat treatment chamber (4) itself.

IPC 1-7
C23C 11/10; **C23C 11/12**; **C23C 11/14**; **C23C 11/18**

IPC 8 full level
C23C 8/22 (2006.01)

CPC (source: EP)
C23C 8/22 (2013.01)

Citation (search report)

- US RE29881 E 19790116
- GB 1382075 A 19750129 - HAYES INC C I
- GB 1544214 A 19790419 - GEN ATOMIC CO
- US 4035203 A 19770712 - L HERMITE MATHURIN, et al
- US 4145232 A 19790320 - SOLOMON JACK
- US 4006042 A 19770201 - KIEFERLE WOLFGANG

Cited by
WO9429491A1

Designated contracting state (EPC)
AT BE CH DE FR IT LI LU NL SE

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EP 0040023 A1 19811118; GB 2076023 A 19811125; GB 2076023 B 19830803; ZA 812877 B 19820428

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