Title (en)
PROCESS FOR REDUCING THE OXIDATION LEVEL OF METALLIC OXIDES

Publication
EP 0222452 B1 19890405 (DE)

Application
EP 86201942 A 19861107

Priority
DE 3540541 A 19851115

Abstract (en)
[origin: US4789580A] Disclosed is a process to effect a reduction to a desired, constant degree as exactly as possible and to achieve a low surplus of carbon. The reduction by treatment with carbonaceous reducing agents is effected in such a manner that fine-grained solids, which contain higher metal oxides, are calcined at 800 DEG to 1100 DEG C. with hot gases in which the solids are suspended. The calcined solids are reduced at a temperature in the range of from 800 DEG to 1100 DEG C. to form low metal oxides in a stationary fluidized bed, which is supplied with carbonaceous reducing agents and oxygen-containing gases. The carbonaceous reducing agents are supplied to the stationary fluidized bed at such a rate so as to reduce the higher metal oxides to low metal oxides, while maintaining the reduction temperature in the stationary fluidized bed and insuring that the discharged matter has the desired carbon content. The stationary fluidized bed exhaust gas is supplied as secondary gas to the calcining step, and fuel is supplied to the calcining step at a rate such that the total of the heat generated by the combustion of the fuel and of the heat suplied by the exhaust gas provides the heat which is required for calcination.

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C22B 5/10; C22B 23/02; C22B 47/00

IPC 8 full level
C22B 5/10 (2006.01); C22B 23/02 (2006.01); C22B 47/00 (2006.01)

CPC (source: EP US)
C22B 5/10 (2013.01 - EP US); C22B 23/023 (2013.01 - EP US); C22B 47/00 (2013.01 - EP US); Y10S 423/16 (2013.01 - EP US)

Cited by
CN104911332A; AU2008252051B2; EA017444B1; US9175226B2; US7854608B2; EP3854894A4; WO9528504A1; WO2009074170A1; WO8909290A1

Designated contracting state (EPC)
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