Title (en)

MICROWAVE HEATING METHOD AND APPARATUS FOR IRON OXIDE REDUCTION

Title (de)

MIKROWELLENERHITZUNGSVERFAHREN UND -VORRICHTUNG FÜR DIE REDUKTION VON EISENOXID

Title (fr)

PROCÉDÉ DE CHAUFFAGE MICRO-ONDES ET APPAREIL DE RÉDUCTION DE L'OXYDE DE FER

Publication

EP 2089549 A2 20090819 (EN)

Application

EP 07839202 A 20071003

Priority

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Abstract (en)

[origin: WO2008051356A2] A method and apparatus for reducing iron oxides using microwave heating in a furnace chamber which is sealed against the entrance of air reduces trie energy required and produces a low temperature reduction and allows the recovery of combustible synthetic gas as a byproduct of the process. Avoidance of the reduction of sulfur, phorphorus and silica is also insured, as is the need to reduce the silica content of the feed material prior to reducing the ore. A continuous rotary hearth furnace, a rotary kiln, a linear conveyor and vertical shaft furnace chamber configurations are described. A secondary heating zone can also be included to process the reduced iron into iron nuggets or liquid metallic iron.

IPC 8 full level

C21B 11/00 (2006.01)

CPC (source: EP)

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