

Title (en)

PRODUCING CARBURIZED SPONGE IRON BY MEANS OF HYDROGEN-BASED DIRECT REDUCTION

Title (de)

HERSTELLUNG VON KARBURIERTEM EISENSCHWAMM MITTELS WASSERSTOFFBASIERTER DIREKTREDUKTION

Title (fr)

FABRICATION D'ÉPONGE DE FER CARBURÉE PAR RÉDUCTION DIRECTE À BASE D'HYDROGÈNE

Publication

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Application

EP 19728718 A 20190612

Priority

- EP 18177161 A 20180612
- EP 2019065283 W 20190612

Abstract (en)

[origin: CA3103187A1] The invention relates to a process for producing carburized directly reduced iron sponge from iron oxide material. Firstly, direct reduction is carried out by means of a reduction gas consisting at least predominantly of H₂ and the carbon content in the iron sponge is then increased by means of a carburizing gas which is fed in, after which used carburizing gas is at least partly taken off while largely avoiding mixing with the reduction gas. The plant for producing carburized directly reduced iron sponge from iron oxide material comprises a reduction zone for directly reducing introduced iron oxide material to directly reduced product by means of reduction gas consisting predominantly of H₂ and a reduction gas feed conduit opening into the reduction zone. It also comprises a carburization zone having a carburizing gas feed conduit opening into the carburization zone and a carburization offgas conduit.

IPC 8 full level

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CPC (source: EP US)

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