

Title (en)

Process for making sintered iron components having a pore-free zone

Title (de)

Verfahren zur Herstellung von Sintereisen-Formteilen mit porenfreier Zone

Title (fr)

Procédé pour la production des pièces frittées à base de fer, ayant un zone non-poreuse

Publication

EP 0565160 B1 19961106 (DE)

Application

EP 93200835 A 19930323

Priority

DE 4211319 A 19920404

Abstract (en)

[origin: US5453242A] A process for producing from iron materials a sintered molded part which is pore-free in individual zones or boundary zones but porous in the other zones. The process is based on a molded part brought to a residual porosity of about 10% by volume by conventional powder pressing and sintering processes. By additional process steps such as zonal introduction of additional materials or local mechanical recompacting, certain zones or local areas are brought to a residual porosity of 5% by volume or less; at the same time, a closed pore structure is produced in these zones. Under these preconditions, in a final HIP or sintering HIP process step the sintered molded part can be brought to 100% material density in the pretreated zones so that they substantially completely free from pores. The major advantages include local improvement in material properties and calibratability of the finished sintered molded part.

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B22F 3/12

IPC 8 full level

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CPC (source: EP US)

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Cited by

EP1839780A3; US9956614B2; WO2013013254A1; US7905018B2

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DOCDB simple family (publication)

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