

Title (en)

IRON POWDER FOR POWDER METALLURGY, PROCESS FOR PRODUCING THE SAME, AND IRON-BASE POWDER MIXTURE FOR POWDER METALLURGY

Title (de)

EISENPULVER, HERSTELLUNGSVERFAHREN UND PULVERMISCHUNG FÜR PULVERMETALLURGIE

Title (fr)

POUDRE DE FER POUR METALLURGIE DES POUDRES, PROCEDE DE PRODUCTION CORRESPONDANT ET MELANGE DE POUDRE A BASE DE FER POUR METALLURGIE DES POUDRES

Publication

EP 0808681 A4 19991229 (EN)

Application

EP 96935351 A 19961017

Priority

- JP 9603007 W 19961017
- JP 27027595 A 19951018

Abstract (en)

[origin: WO9714523A1] Iron powder and iron-base powder mixture for powder metallurgy, which can provide sinters excellent in machinability and wear resistance. The iron powder contains 0.03-0.3 wt.% boron, at most 0.07 wt.% chromium, less than 0.3 wt.% manganese, and the balance consisting of iron and unavoidable impurities, and has an intensity ratio of boron to iron of at least 0.05 in the spectrum of the powder surface as determined by Auger electron spectroscopy. The powder serves to increase the amount of graphite remaining in sinters to thereby improve the machinability and wear resistance thereof. Another iron powder is prepared by adding sulfur, selenium, tellurium, molybdenum or the like to the above powder. These powders are mixed with MoO₃ or WO₃ powder to develop a so-called iron-base powder mixture. It is produced by water-atomizing the above powders while adjusting the oxygen content of molten steel to 100 ppm or below.

IPC 1-7

B22F 1/00; B22F 9/08; C22C 33/02; C22C 38/00

IPC 8 full level

C22C 33/02 (2006.01)

CPC (source: EP)

C22C 33/0264 (2013.01)

Citation (search report)

- [E] US 5599377 A 19970204 - UENOSONO SATOSHI [JP], et al
- [A] US 4849164 A 19890718 - JANDESKA WILLIAM F [US], et al
- [A] EP 0149210 A2 19850724 - WEUSTHOFF GMBH DR [DE]
- See references of WO 9714523A1

Cited by

US2011164715A1; US8855259B2; WO2010107372A1; US9469890B2

Designated contracting state (EPC)

SE

DOCDB simple family (publication)

WO 9714523 A1 19970424; EP 0808681 A1 19971126; EP 0808681 A4 19991229; JP 3353836 B2 20021203

DOCDB simple family (application)

JP 9603007 W 19961017; EP 96935351 A 19961017; JP 51569097 A 19961017