

Title (en)

METAL POWDER FOR POWDER METALLURGY, COMPOUND, GRANULATED POWDER, AND SINTERED BODY

Title (de)

METALLPULVER FÜR PULVERMETALLURGIE, VERBINDUNG, GRANULIERTES PULVER UND GESINTERTER KÖRPER

Title (fr)

POUDRE DE MÉTAL POUR MÉTALLURGIE DES POUDRES, COMPOSÉ, POUDRE GRANULÉE ET CORPS FRITTÉ

Publication

EP 3050985 A1 20160803 (EN)

Application

EP 16152921 A 20160127

Priority

JP 2015016091 A 20150129

Abstract (en)

A metal powder for powder metallurgy includes particles, which contain Fe as a principal component, Cr in a proportion of 10 to 30 mass%, C in a proportion of 0.1 to 2 mass%, and Si in a proportion of 0.2 to 1.5 mass%, and in which when one element selected from the group consisting of Ti, V, Y, Zr, Nb, Hf, and Ta is defined as a first element, and one element selected from the group, and having a higher group number in the periodic table than that of the first element or having the same group number in the periodic table as that of the first element and a higher period number in the periodic table than that of the first element is defined as a second element, the first element is contained in a proportion of 0.01 to 0.5 mass%, and the second element is contained in a proportion of 0.01 to 0.5 mass%, wherein the number of crystals in the cross section of the particle is 1 or more and 5 or less on average.

IPC 8 full level

C22C 33/02 (2006.01); **B22F 1/10** (2022.01); **B22F 3/24** (2006.01); **C22C 38/18** (2006.01); **B22F 3/15** (2006.01)

CPC (source: CN EP US)

B22F 1/10 (2022.01 - CN EP US); **B22F 3/24** (2013.01 - EP US); **B22F 5/00** (2013.01 - US); **B22F 9/04** (2013.01 - EP US);
C22C 33/0285 (2013.01 - EP US); **C22C 38/002** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US);
C22C 38/04 (2013.01 - EP US); **C22C 38/12** (2013.01 - US); **C22C 38/42** (2013.01 - US); **C22C 38/46** (2013.01 - EP US);
C22C 38/48 (2013.01 - EP US); **C22C 38/50** (2013.01 - EP US); **B22F 1/09** (2022.01 - CN EP US); **B22F 3/15** (2013.01 - EP US);
B22F 2003/248 (2013.01 - EP US); **B22F 2301/35** (2013.01 - US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

Citation (applicant)

- JP 2012087416 A 20120510 - SEIKO EPSON CORP
- "Iron and steel - Methods for determination of carbon content", JIS G 1211, 2011
- "Iron and steel - Methods for determination of silicon content", JIS G 1212, 1997
- "Iron and steel - Methods for determination of manganese content", JIS G 1213, 2001
- "Iron and steel - Methods for determination of phosphorus content", JIS G 1214, 1998
- "Iron and steel - Methods for determination of sulfur content", JIS G 1215, 2010
- "Iron and steel - Methods for determination of nickel content", JIS G 1216, 1997
- "Iron and steel - Methods for determination of chromium content", JIS G 1217, 2005
- "Iron and steel - Methods for determination of molybdenum content", JIS G 1218, 1999
- "Iron and steel- Methods for determination of copper content", JIS G 1219, 1997
- "Iron and steel - Methods for determination of tungsten content", JIS G 1220, 1994
- "Iron and steel - Methods for determination of vanadium content", JIS G 1221, 1998
- "Iron and steel - Methods for determination of cobalt content", JIS G 1222, 1999
- "Iron and steel - Methods for determination of titanium content", JIS G 1223, 1997
- "Iron and steel - Methods for determination of aluminum content", JIS G 1224, 2001
- "Iron and steel - Methods for determination of arsenic content", JIS G 1225, 2006
- "Iron and steel - Methods for determination of tin content", JIS G 1226, 1994
- "Iron and steel - Methods for determination of boron content", JIS G 1227, 1999
- "Iron and steel - Methods for determination of nitrogen content", JIS G 1228, 2006
- "Steel - Methods for determination of lead content", JIS G 1229, 1994
- "Methods for determination of zirconium in steel", JIS G 1232, 1980
- "Steel - Method for determination of selenium content", JIS G 1233, 1994
- "Methods for determination of tellurium in steel", JIS G 1234, 1981
- "Methods for determination of antimony in iron and steel", JIS G 1235, 1981
- "Method for determination of tantalum in steel", JIS G 1236, 1992
- "Iron and steel- Methods for determination of niobium content", JIS G 1237, 1997

Citation (search report)

- [XAI] EP 1768803 A1 20070404 - HOEGANAES AB [SE]
- [XAI] US 2007023107 A1 20070201 - WESTIN LEIF [SE]
- [XAI] US 2010258217 A1 20101014 - KUEHMANN CHARLES J [US], et al
- [XAI] US 2003089198 A1 20030515 - BERGLUND ROGER [SE], et al
- [XAI] EP 1295958 A1 20030326 - HITACHI LTD [JP]

Cited by

EP3467128A1; EP3695020A4

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3050985 A1 20160803; EP 3050985 B1 20190522; CN 105834413 A 20160810; CN 105834413 B 20200317; JP 2016141820 A 20160808;
JP 6319121 B2 20180509; US 2016222496 A1 20160804

DOCDB simple family (application)

EP 16152921 A 20160127; CN 201610037413 A 20160120; JP 2015016091 A 20150129; US 201615002769 A 20160121