

Title (en)
IRON-BASE MIXED POWDERS AND PROCESSES FOR PRODUCTION OF IRON-BASE POWDER COMPACTS AND SINTERED IRON-BASE POWDER COMPACTS

Title (de)
MISCHPULVER AUF EISENBASIS UND VERFAHREN ZUR HERSTELLUNG VON PULVERPRESSLINGEN UND GESINTERTEN PULVERPRESSLINGEN AUF EISENBASIS

Title (fr)
POUDRES MELANGEES A BASE DE FER, PROCEDES DE FABRICATION DE PRODUITS COMPACTES EN POUDRE A BASE DE FER ET PRODUITS COMPACTES EN POUDRE FRITTEE A BASE DE FER

Publication
EP 1985393 B1 20161221 (EN)

Application
EP 07714625 A 20070214

Priority
• JP 2007053125 W 20070214
• JP 2006037916 A 20060215
• JP 2006337876 A 20061215

Abstract (en)
[origin: EP1985393A1] An iron-based powder mixture for powder metallurgy is provided, in which iron-based powder is blended with at least one selected from talc and steatite, and preferably further blended with metallic soap, thereby when a compacted body is sintered, furnace environment is not adversely affected, and excellent compaction performance is achieved even in a low temperature range of less than 100 °C, and more preferably, an obtained sintered body has excellent machining performance.

IPC 8 full level
B22F 3/02 (2006.01); **B22F 1/00** (2022.01); **B22F 1/10** (2022.01); **B22F 1/105** (2022.01); **C22C 33/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/04** (2006.01); **C22C 38/12** (2006.01); **C22C 38/16** (2006.01)

CPC (source: EP KR US)
B22F 1/00 (2013.01 - EP KR US); **B22F 1/10** (2022.01 - EP KR US); **B22F 1/105** (2022.01 - EP KR US); **B22F 3/02** (2013.01 - KR); **B22F 3/10** (2013.01 - KR); **C22C 33/0264** (2013.01 - EP KR US); **C22C 38/08** (2013.01 - EP KR US); **C22C 38/12** (2013.01 - EP KR US); **C22C 38/16** (2013.01 - EP KR US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

Citation (examination)
• CN 102974917 A 20130320 - HARBIN TURBINE CO LTD
• US 2014238559 A1 20140828 - ANGAL RAVISHANKAR P [US], et al
• US 2009320966 A1 20091231 - MORIN JAMES A [US]
• GONZÁLEZ ALBARRÁN M A ET AL: "Effect of Preweld Heat Treatment on the Microstructure of Heat-Affected Zone (HAZ) and Weldability of Inconel 939 Superalloy", JOURNAL OF MATERIALS ENGINEERING AND PERFORMANCE, ASM INTERNATIONAL, MATERIALS PARK, OH, US, vol. 23, no. 4, 22 January 2014 (2014-01-22), pages 1125 - 1130, XP035372403, ISSN: 1059-9495, [retrieved on 20140122], DOI: 10.1007/S11665-013-0704-Y
• CAO J ET AL: "Effects of post-weld heat treatment on microstructure and mechanical properties of TLP bonded Inconel718 superalloy", MATERIALS SCIENCE AND ENGINEERING A: STRUCTURAL MATERIALS: PROPERTIES, MICROSTRUCTURES AND PROCESSING, ELSEVIER BV, NL, vol. 590, 12 October 2013 (2013-10-12), pages 1 - 6, XP028781628, ISSN: 0921-5093, DOI: 10.1016/J.MSEA.2013.10.013
• KAYACAN R ET AL: "The effects of pre- and post-weld heat treatment variables on the strain-age cracking in welded Rene 41 components", MATERIALS RESEARCH BULLETIN, ELSEVIER, KIDLINGTON, GB, vol. 39, no. 14-15, 2 December 2004 (2004-12-02), pages 2171 - 2186, XP004607869, ISSN: 0025-5408, DOI: 10.1016/J.MATERRESBULL.2004.08.003

Cited by
CN104114306A; FR3138817A1; WO2013122873A1; WO2016124532A1; US11512372B2; US8795407B2; US8992658B2; US9393617B2; WO2024033586A1

Designated contracting state (EPC)
DE SE

DOCDB simple family (publication)
EP 1985393 A1 20081029; EP 1985393 A4 20150610; EP 1985393 B1 20161221; CA 2642254 A1 20070920; CA 2642254 C 20130723; CN 101384387 A 20090311; CN 101384387 B 20111221; JP 2008169460 A 20080724; JP 2011084816 A 20110428; JP 4737107 B2 20110727; JP 4844693 B2 20111228; KR 101101734 B1 20120105; KR 20080085920 A 20080924; KR 20110114679 A 20111019; TW 200735985 A 20071001; TW 201244852 A 20121116; TW I368544 B 20120721; TW I412416 B 20131021; US 2009041608 A1 20090212; WO 2007105429 A1 20070920

DOCDB simple family (application)
EP 07714625 A 20070214; CA 2642254 A 20070214; CN 200780005727 A 20070214; JP 2007035371 A 20070215; JP 2007053125 W 20070214; JP 2011006271 A 20110114; KR 20087020086 A 20070214; KR 20117019641 A 20070214; TW 101117534 A 20070214; TW 96105451 A 20070214; US 27947107 A 20070214