

Title (en)

Apparatus to produce a variety of formed parts of powder.

Title (de)

Vorrichtung zum Herstellen einer Vielfalt von Formteilen aus Pulver.

Title (fr)

Appareil pour la fabrication d'une diversité des objets moulés de poudre.

Publication

EP 1731246 A1 20061213 (DE)

Application

EP 06008152 A 20060420

Priority

DE 102005027032 A 20050611

Abstract (en)

In apparatus for forming a molding from powder, comprising (a) a matrix (1) formed from a base structure (2) in which a matrix sheath (3) with shaping surface(s) (4) for the molding is inserted and (b) pressing punch(es) (5) entering an opening in the sheath in a pressing direction (P) to compress the material in the sheath, the sheath is formed from at least two parts (6, 7), which are relatively displaceable in the pressing direction.

IPC 8 full level

B22F 3/03 (2006.01)

CPC (source: EP US)

B22F 3/03 (2013.01 - EP US); **B30B 11/04** (2013.01 - EP US); **B22F 2003/033** (2013.01 - EP US)

Citation (applicant)

- JP H09176701 A 19970708 - TOYOTA MOTOR CORP
- US 5364253 A 19941115 - KOJIMA KIYOSHI [JP], et al
- US 3524220 A 19700818 - DAVISON SANFORD J
- JP S63154299 A 19880627 - MAZDA MOTOR

Citation (search report)

- [X] US 5364253 A 19941115 - KOJIMA KIYOSHI [JP], et al
- [X] US 5455002 A 19951003 - KOBAYASHI KAZUTO [JP], et al
- [XY] US 3524220 A 19700818 - DAVISON SANFORD J
- [PX] EP 1602473 A1 20051207 - SMS MEER GMBH [DE]
- [Y] US 5498147 A 19960312 - KATAGIRI TAKESHI [JP], et al
- [Y] EP 0826449 A1 19980304 - HONDA MOTOR CO LTD [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 11 28 November 1997 (1997-11-28)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12 5 December 2003 (2003-12-05)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 018, no. 243 (M - 1602) 10 May 1994 (1994-05-10)

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 1731246 A1 20061213; EP 1731246 B1 20090916; AT E442926 T1 20091015; CA 2550095 A1 20061211; DE 102005027032 A1 20061228; DE 102005027032 B4 20070628; DE 502006004836 D1 20091029; ES 2330771 T3 20091215; JP 2006346749 A 20061228; JP 4621632 B2 20110126; PL 1731246 T3 20100226; US 2006286194 A1 20061221; US 7553145 B2 20090630

DOCDB simple family (application)

EP 06008152 A 20060420; AT 06008152 T 20060420; CA 2550095 A 20060609; DE 102005027032 A 20050611; DE 502006004836 T 20060420; ES 06008152 T 20060420; JP 2006162371 A 20060612; PL 06008152 T 20060420; US 45113706 A 20060612