

Title (en)
PARTICULATE FEEDSTOCK FOR METAL INJECTION MOLDING

Title (de)
PULVERMISCHUNG ZUM SPRITZGIESSEN VON METALL

Title (fr)
MATERIAU PARTICULAIRE D'ALIMENTATION POUR MOULAGE PAR INJECTION

Publication
EP 0666783 B1 20000412 (EN)

Application
EP 93918800 A 19930906

Priority

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- AU PL463692 A 19920911
- AU PL968093 A 19930629

Abstract (en)
[origin: WO9406586A1] Particles of metal alloys and composites have been developed that are particularly suitable for use in producing thixotropic alloys and in the injection molding of such alloys. The particulate material comprises particles of metal alloy or composite, wherein a substantial proportion of the particles is shaped such that the ratio of the length of the largest dimension of a particle to the effective diameter of the particle is in the range of 1.0 to 4.0 and the substantial proportion of particles has a particle size wherein the largest dimension of the particles lies within the range of 0.5 to 5.0 mm. This allows convenient handling of the particles whilst also avoiding binding or clogging of the screw, in the case where a screw extruder is used.

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B22D 23/00; **C22B 9/16**; **B22D 17/00**

IPC 8 full level
B22D 17/00 (2006.01); **B22D 17/20** (2006.01); **B22F 1/05** (2022.01); **B22F 1/06** (2022.01); **B22F 3/02** (2006.01); **B22F 3/22** (2006.01); **C22B 9/16** (2006.01); **C22C 1/00** (2006.01)

CPC (source: EP US)
B22D 17/007 (2013.01 - EP); **B22F 1/05** (2022.01 - EP US); **B22F 1/06** (2022.01 - EP US); **B22F 3/225** (2013.01 - EP US); **C22B 9/16** (2013.01 - EP); **C22C 1/12** (2023.01 - EP); **B22F 2998/00** (2013.01 - EP)

Citation (examination)

- DE 3639737 A1 19880601 - SIEMENS AG [DE]
- US 3881913 A 19750506 - BARANNIK IVAN ANDREEVICH, et al
- GB 2182063 A 19870507 - MITSUBISHI METAL CORP
- US 4460407 A 19840717 - KEITH EARL K [US]
- Look-up Table Mesh/Microns
- Design Engineering Feb. 1989, page 33
- Hoechst Data Sheet "Korbid und Metallurgische Produkte", Sept. 1978
- Brochure of Reade Manufacturing Company
- Brochure of Reynolds Metals Company
- Analysis of Eckart Granules of 12.12.2000
- PFEIFER H.: "Grundlagen der Fordertechnik" 1989
- MENGES G.: "Einführung in der Kunststoffverarbeitung" 1986
- "Granulierung der thermoplastischen Kunststoffen" VDI-Verlag GmbH 1974
- JOHANNABER F.: "Kunststoffmaschinenführer" 1992
- Brochure from Poudmet
- ERICKSON S.: Proceedings 44th Annual World Magnesium Conference, Tokyo, 1987
- "Thixomolding" Proceedings 47th Annual World Magnesium Conference, Cannes, France, 1990
- KURIHARA K. et al: Japanese language article, pages 255-260, April 1981 and English translation thereof
- GHOSH D. et al: Proceedings on the International Symposium on Advances in Production and Fabrication of Light Metals and Metal Matrix Composites, Alberta, August 23-27, 1992
- PASTERNAK D. et al: Proceedings of the Second International Conference of the Semi-Solid Processing of Alloys and Composites, Massachusetts Institute of Technology, Cambridge, Massachusetts, 1993
- PASTERNAK D. et al: Proceedings of the Second International Conference of Semi-Solid Processing of Alloys and Composites, Massachusetts Institute of Technology, June 10-12, 1992

Cited by
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