

B22 CASTING; POWDER METALLURGY

B22F WORKING METALLIC POWDER; MANUFACTURE OF ARTICLES FROM METALLIC POWDER; MAKING METALLIC POWDER (processes or devices for granulating materials in general B01J 2/00; making ceramics by compacting or sintering C04B, e.g. C04B 35/64; for the production of metals as such, see class C22; reduction or decomposition of metal compounds in general C22B; making alloys by powder metallurgy C22C; electrolytic production of metal powder C25C 5/00)

- (1) This subclass covers the making of metallic powder only insofar as powder with specific physical characteristics is made. [6]
 (2) In this subclass, the following terms or expressions are used with the meanings indicated:
 – “metallic powder” covers powders containing a substantial proportion of non-metallic material;
 – “powder” includes somewhat larger particles which are worked, obtained or behave in a manner similar to powder, e.g. fibres.

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| <p>1/00 Special treatment of metallic powder, e.g. to facilitate working, to improve properties; Metallic powders <u>per se</u>, e.g. mixtures of particles of different composition (C04, C08 take precedence)</p> <p>1/02 . comprising coating of the powder [2]</p> <p>3/00 Manufacture of workpieces or articles from metallic powder characterised by the manner of compacting or sintering; Apparatus specially adapted therefor</p> <p>3/02 . Compacting only</p> <p>3/03 . . Press-moulding apparatus therefor [6]</p> <p>3/035 . . . with one or more of the parts thereof being pivotally mounted [6]</p> <p>3/04 . . by applying fluid pressure</p> <p>3/06 . . by centrifugal forces</p> <p>3/08 . . by explosive forces</p> <p>3/087 . . using high energy impulses, e.g. magnetic field impulses [6]</p> <p>3/093 . . using vibration [6]</p> <p>3/10 . Sintering only</p> <p>3/105 . . by using electric current, laser radiation or plasma (B22F 3/11 takes precedence) [6]</p> <p>3/11 . . Making porous workpieces or articles [6]</p> <p>3/115 . by spraying molten metal, i.e. spray sintering, spray casting [6]</p> <p>3/12 . Both compacting and sintering (by forging B22F 3/17) [6]</p> <p>3/14 . . simultaneously</p> <p>3/15 . . . Hot isostatic pressing [6]</p> <p>3/16 . . in successive or repeated steps</p> <p>3/17 . by forging [6]</p> <p>3/18 . by using pressure rollers [6]</p> <p>3/20 . by extruding</p> <p>3/22 . for producing castings from a slip</p> <p>3/23 . involving a self-propagating high-temperature synthesis or reaction sintering step [6]</p> <p>3/24 . After-treatment of workpieces or articles</p> <p>3/26 . . Impregnating</p> <p>5/00 Manufacture of workpieces or articles from metallic powder characterised by the special shape of the product</p> <p>5/02 . of piston rings</p> | <p>5/04 . of turbine blades</p> <p>5/06 . of threaded articles, e.g. nuts</p> <p>5/08 . of toothed articles, e.g. gear wheels; of cam discs</p> <p>5/10 . of articles with cavities or holes, not otherwise provided for in the preceding subgroups [6]</p> <p>5/12 . of tubes or wires [6]</p> <p>7/00 Manufacture of composite layers, workpieces, or articles, comprising metallic powder, by sintering the powder, with or without compacting</p> <p>7/02 . of composite layers</p> <p>7/04 . . with one or more layers not made from powder, e.g. made from solid metal</p> <p>7/06 . of composite workpieces or articles from parts, e.g. to form tipped tools</p> <p>7/08 . . with one or more parts not made from powder</p> <p>8/00 Manufacture of articles from scrap or waste metal particles [6]</p> <p>9/00 Making metallic powder or suspensions thereof</p> <p>9/02 . using physical processes [3]</p> <p>9/04 . . starting from solid material, e.g. by crushing, grinding or milling (crushing, grinding or milling, in general, <u>see</u> the relevant subclasses, e.g. B02C) [3]</p> <p>9/06 . . starting from liquid material [3]</p> <p>9/08 . . . by casting, e.g. through sieves or in water, by atomising or spraying (using electric discharge B22F 9/14) [3]</p> <p>9/10 using centrifugal force [3]</p> <p>9/12 . . starting from gaseous material [3]</p> <p>9/14 . . using electric discharge [3]</p> <p>9/16 . using chemical processes [3]</p> <p>9/18 . . with reduction of metal compounds [3]</p> <p>9/20 . . . starting from solid metal compounds [3]</p> <p>9/22 using gaseous reductors [3]</p> <p>9/24 . . . starting from liquid metal compounds, e.g. solutions [3]</p> <p>9/26 using gaseous reductors [3]</p> <p>9/28 . . . starting from gaseous metal compounds [3]</p> <p>9/30 . . with decomposition of metal compounds, e.g. by pyrolysis [3]</p> |
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