| B B22 | Sektion Klasse | SECTION B — PERFORMING OPERATIONS; TRANSPORTING CASTING; POWDER METALLURGY |
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| B22F | Unterklasse | 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, \underline{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) |
| B22F 1/00 | Hauptgruppe | 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) |
| B22F 1/02 | 1-Punkt Untergruppe | . comprising coating of the powder [2] |
| B22F 3/00 | Hauptgruppe | Manufacture of workpieces or articles from metallic powder characterised by the manner of compacting or sintering; Apparatus specially adapted therefor |
| B22F 3/02 | 1-Punkt Untergruppe | . Compacting only |
| B22F 3/03 | 2-Punkt Untergruppe | Press-moulding apparatus therefor [6] |
| B22F 3/035 | 3-Punkt Untergruppe | with one or more of the parts thereof being pivotally mounted [6] |
| B22F 3/04 | 2-Punkt Untergruppe | by applying fluid pressure |
| B22F 3/06 | 2-Punkt Untergruppe | by centrifugal forces |
| B22F 3/08 | 2-Punkt Untergruppe | by explosive forces |
| B22F 3/087 | 2-Punkt Untergruppe | using high energy impulses, e.g. magnetic field impulses [6] |
| B22F 3/093 | 2-Punkt Untergruppe | using vibration [6] |
| B22F 3/10 | 1-Punkt Untergruppe | . Sintering only |
| B22F 3/105 | 2-Punkt Untergruppe | by using electric current, laser radiation or plasma (B22F 3/11 takes precedence) [6] |
| B22F 3/11 | 2-Punkt Untergruppe | Making porous workpieces or articles [6] |
| B22F 3/115 | 1-Punkt Untergruppe | . by spraying molten metal, i.e. spray sintering, spray casting [6] |
| B22F 3/12 | 1-Punkt Untergruppe | . Both compacting and sintering (by forging B22F 3/17) [6] |
| B22F 3/14 | 2-Punkt Untergruppe | simultaneously |
| B22F 3/15 | 3-Punkt Untergruppe | Hot isostatic pressing [6] |
| B22F 3/16 | 2-Punkt Untergruppe | in successive or repeated steps |
| B22F 3/17 | 1-Punkt Untergruppe | . by forging [6] |
| B22F 3/18 | 1-Punkt Untergruppe | . by using pressure rollers [6] |
| B22F 3/20 | 1-Punkt Untergruppe | . by extruding |
| B22F 3/22 | 1-Punkt Untergruppe | . for producing castings from a slip |
| B22F 3/23 | 1-Punkt Untergruppe | . involving a self-propagating high-temperature synthesis or reaction sintering step [6] |
| B22F 3/24 | 1-Punkt Untergruppe | . After-treatment of workpieces or articles |

| Symbol | Тур | Titel |
|-----------|---------------------|---|
| B22F 3/26 | 2-Punkt Untergruppe | Impregnating |
| B22F 5/00 | Hauptgruppe | $\label{thm:manufacture} \textbf{Manufacture of workpieces or articles from metallic powder characterised by the special shape of the product}$ |
| B22F 5/02 | 1-Punkt Untergruppe | . of piston rings |
| B22F 5/04 | 1-Punkt Untergruppe | . of turbine blades |
| B22F 5/06 | 1-Punkt Untergruppe | . of threaded articles, e.g. nuts |
| B22F 5/08 | 1-Punkt Untergruppe | . of toothed articles, e.g. gear wheels; of cam discs |
| B22F 5/10 | 1-Punkt Untergruppe | . of articles with cavities or holes, not otherwise provided for in the preceding subgroups [6] |
| B22F 5/12 | 1-Punkt Untergruppe | . of tubes or wires [6] |
| B22F 7/00 | Hauptgruppe | Manufacture of composite layers, workpieces, or articles, comprising metallic powder, by sintering the powder, with or without compacting |
| B22F 7/02 | 1-Punkt Untergruppe | . of composite layers |
| B22F 7/04 | 2-Punkt Untergruppe | with one or more layers not made from powder, e.g. made from solid metal |
| B22F 7/06 | 1-Punkt Untergruppe | . of composite workpieces or articles from parts, e.g. to form tipped tools |
| B22F 7/08 | 2-Punkt Untergruppe | with one or more parts not made from powder |
| B22F 8/00 | Hauptgruppe | Manufacture of articles from scrap or waste metal particles [6] |
| B22F 9/00 | Hauptgruppe | Making metallic powder or suspensions thereof |
| B22F 9/02 | 1-Punkt Untergruppe | . using physical processes [3] |
| B22F 9/04 | 2-Punkt Untergruppe | starting from solid material, e.g. by crushing, grinding or milling (crushing, grinding or milling, in general, see the relevant subclasses, e.g. B02C) [3] |
| B22F 9/06 | 2-Punkt Untergruppe | starting from liquid material [3] |
| B22F 9/08 | 3-Punkt Untergruppe | by casting, e.g. through sieves or in water, by atomising or spraying (using electric discharge B22F 9/14) [3] |
| B22F 9/10 | 4-Punkt Untergruppe | using centrifugal force [3] |
| B22F 9/12 | 2-Punkt Untergruppe | starting from gaseous material [3] |
| B22F 9/14 | 2-Punkt Untergruppe | using electric discharge [3] |
| B22F 9/16 | 1-Punkt Untergruppe | . using chemical processes [3] |
| B22F 9/18 | 2-Punkt Untergruppe | with reduction of metal compounds [3] |
| B22F 9/20 | 3-Punkt Untergruppe | starting from solid metal compounds [3] |
| B22F 9/22 | 4-Punkt Untergruppe | using gaseous reductors [3] |
| B22F 9/24 | 3-Punkt Untergruppe | starting from liquid metal compounds, e.g. solutions [3] |
| B22F 9/26 | 4-Punkt Untergruppe | using gaseous reductors [3] |
| B22F 9/28 | 3-Punkt Untergruppe | starting from gaseous metal compounds [3] |
| B22F 9/30 | 2-Punkt Untergruppe | with decomposition of metal compounds, e.g. by pyrolysis [3] |