

Title (en)

PROCESS FOR PREPARING SEMI-FINISHED CREEP RESISTANT PRODUCTS FROM HIGH MELTING METAL

Publication

EP 0396185 B1 19930721 (DE)

Application

EP 90201056 A 19900426

Priority

AT 105989 A 19890503

Abstract (en)

[origin: EP0396185A1] The invention relates to a process for preparing dispersion- strengthened alloys of metals having a high melting point, of the 5th and 6th subgroups of the Periodic Table, for applications in semifinished products and shaped articles, in which particularly high high-temperature creep resistance is required. Such components are, for example, tools for isothermal high-temperature forging or rotary anodes for X-ray tubes. Such materials have been prepared to date exclusively using high-temperature shaping processes with extremely high deformations. According to the present invention, high high- temperature creep resistances can be achieved using dispersion strengthening in two to four steps by high-temperature shaping with a deformation of only 3-25% per step and by means of annealing processes at least temporarily below the particular recrystallisation temperature between the individual shaping processes. The maximum deformation of such material is 75%, but as a rule substantially less.

IPC 1-7

C22C 32/00; C22F 1/18

IPC 8 full level

B22F 3/24 (2006.01); **C22C 1/04** (2006.01); **C22C 1/10** (2006.01); **C22C 32/00** (2006.01); **C22F 1/00** (2006.01); **C22F 1/18** (2006.01)

CPC (source: EP US)

C22C 1/10 (2013.01 - EP US); **C22C 32/0031** (2013.01 - EP US); **C22F 1/18** (2013.01 - EP US)

Cited by

DE102005033799B4; DE102004010600A1; DE102004010600B4

Designated contracting state (EPC)

BE CH DE FR GB IT LI SE

DOCDB simple family (publication)

EP 0396185 A1 19901107; EP 0396185 B1 19930721; AT 392432 B 19910325; AT A105989 A 19900915; DE 59002005 D1 19930826; JP H02301545 A 19901213; US 5051139 A 19910924

DOCDB simple family (application)

EP 90201056 A 19900426; AT 105989 A 19890503; DE 59002005 T 19900426; JP 11568890 A 19900501; US 51729190 A 19900501