

Title (en)

Use of a tungsten heavy metal alloy

Title (de)

Verwendung einer Wolfram-Schwermetalllegierung

Title (fr)

Utilisation d'un alliage de métal lourd à base de tungstène

Publication

**EP 1217086 A3 20050706 (DE)**

Application

**EP 01129194 A 20011210**

Priority

AT 9282000 U 20001219

Abstract (en)

[origin: US2002112523A1] The tungsten/heavy metal alloy is suitable for tools such as extrusion dies and extrusion mandrels for the hot-forming of copper and copper alloys. The novel alloy consists of 80 to 89.9% by weight of tungsten, 2 to 7% by weight of chromium, and a remainder of binder metal. The use of the novel alloy primarily results in a considerably reduced formation of grooves on the surface of the forming tools.

IPC 1-7

**C22C 27/00**; **C22C 1/04**; **B21C 25/02**

IPC 8 full level

**B21C 25/02** (2006.01); **B21J 13/02** (2006.01); **B22F 5/00** (2006.01); **C22C 1/04** (2006.01); **C22C 27/04** (2006.01)

CPC (source: EP US)

**B21C 25/025** (2013.01 - EP US); **B21J 13/02** (2013.01 - EP US); **B22F 5/007** (2013.01 - EP US); **C22C 1/045** (2013.01 - EP US); **C22C 27/04** (2013.01 - EP US); **B22F 2003/166** (2013.01 - EP US); **B22F 2998/00** (2013.01 - EP US); **B22F 2998/10** (2013.01 - EP US); **B22F 2999/00** (2013.01 - EP US)

Citation (search report)

- [X] CH 341314 A 19590930 - GEN ELECTRIC CO LTD [GB]
- [A] US 3680354 A 19720801 - PHILLIPS WILLIAM H JR
- [A] US 4786468 A 19881122 - WANG RONG [US], et al
- [A] DE 2213507 A1 19720928 - MALLORY & CO INC P R

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**US 2002112523 A1 20020822**; **US 6796162 B2 20040928**; AT 4683 U1 20011025; CA 2365366 A1 20020619; EP 1217086 A2 20020626; EP 1217086 A3 20050706; JP 2002241885 A 20020828

DOCDB simple family (application)

**US 2649401 A 20011219**; AT 9282000 U 20001219; CA 2365366 A 20011218; EP 01129194 A 20011210; JP 2001380836 A 20011214