

Title (en)

METHOD FOR CONTROLLING THE OXYGEN CONTENT IN AGGLOMERATED MOLYBDENUM POWDER

Publication

EP 0233574 A3 19890726 (EN)

Application

EP 87101816 A 19870210

Priority

- US 82880186 A 19860212
- US 83120086 A 19860220
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Abstract (en)

[origin: EP0233574A2] A method is disclosed for introducing a controlled level of oxygen into agglomerated molybdenum metal powder, in particular into agglomerated molybdenum plasma spray powder. According to a first aspect of the invention, the method involves contacting the powder with a relatively dilute solution containing a sufficient amount of an oxidizing agent for a sufficient time to increase the oxygen content of the powder followed by removing the resulting partially oxidized powder from the resulting solution. According to a second aspect of the invention, the method involves heating the powder at a sufficient temperature for a sufficient time in the presence of water vapor, and a non-oxidizing atmosphere with the amount of non-oxidizing atmosphere being controlled to produce a partially oxidized molybdenum powder. According to a third aspect of the invention, the method involves forming a relatively uniform mixture of agglomerated powders consisting essentially of molybdenum and one or more oxygen containing compounds of molybdenum wherein the mixture has an oxygen content of more than about 10% by weight and reducing the mixture at a sufficient temperature for a sufficient time to remove a portion of the oxygen therefrom and form a molybdenum powder having an oxygen content of no greater than about 10% by weight.

[origin: EP0233574A2] Method comprises forming a relatively uniform mixt. of agglomerated powders of Mo and O₂ contg. Mo where O₂ content is at least 10% by wt. then reducing the mixt. for a sufficient time and at a temp. of 700-1000 deg.C to remove a portion of the O₂ leaving a Mo powder with an O₂ content of less than 10%, more space 7-10%.

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C22C 32/00

IPC 8 full level

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CPC (source: EP US)

C22C 1/10 (2013.01 - EP US); **C23C 4/06** (2013.01 - EP); **C23C 8/16** (2013.01 - EP)

Citation (search report)

- [A] DE 2433814 A1 19760122 - GOETZEWERKE
- [A] GB 823407 A 19591111 - HARTMETALLWERK IMMELBORN VEB
- [A] DE 1071348 B
- [A] DE 2312810 A1 19740919 - GOETZEWERKE
- [AD] US 4146388 A 19790327 - LAFFERTY WILLIAM D, et al
- [A] US 3909241 A 19750930 - CHENEY RICHARD F, et al

Cited by

EP0374585A1; DE3837782A1; EP0368082A3; US4976779A; US5037705A

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DOCDB simple family (publication)

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