

Title (en)
Grey gold alloy with no nickel and no copper

Title (de)
Graugoldlegierung ohne Nickel und Kupfer

Title (fr)
Alliage d'or gris sans nickel et sans cuivre

Publication
EP 2251444 A1 20101117 (FR)

Application
EP 09405077 A 20090506

Priority
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Abstract (en)
White gold alloy free of nickel and copper, comprises (in mass%): gold (greater than 75); palladium (18-24); at least one element (1-6) comprising manganese, hafnium, niobium, platinum, tantalum, vanadium, zinc, and zirconium; optionally at least one element (greater than 0.5) comprising silicon, gallium, and titanium; and optionally at least one element (greater than 0.2) comprising ruthenium, iridium, and rhenium. An independent claim is included for preparing the alloy, comprising placing the components of the white gold alloy in a crucible; heating the crucible to melt the components; pouring the molten alloy; allowing to harden; subjecting to water quenching; subjecting to at least one cold rolling; and annealing under reducing atmosphere.

Abstract (fr)
La présente invention concerne un alliage d'or gris sans nickel et sans cuivre présentant une dureté convenant en particulier aux horlogers, bijoutiers et joailliers. Cet alliage est constitué de (en pourcentages massiques) : - plus de 75% d'Au ; - de plus de 18% à moins de 24% de Pd ; - de plus de 1% à moins de 6% d'au moins un élément choisi parmi In, Mn, Hf, Nb, Pt, Sn, Ta, V, Zn et Zr ; - éventuellement, au plus 0,5% d'au moins un élément choisi parmi Si, Ga et Ti ; et - éventuellement, au plus 0,2% d'au moins un élément choisi parmi Ru, Ir et Re. L'invention a également trait à un procédé de préparation de cet alliage.

IPC 8 full level
C22C 5/02 (2006.01); **C22F 1/14** (2006.01)

CPC (source: EP US)
C22C 5/02 (2013.01 - EP US); **C22F 1/14** (2013.01 - EP US)

Citation (applicant)
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• JP 3130334 B2 20010131
• PROCEEDINGS OF SANTA FE SYMPOSIUM, 2005, pages 103 - 120, Retrieved from the Internet <URL:http://www.utilisegold.com/jewellery/technology/colours/white_guide>

Citation (search report)
• [X] JP H083662 A 19960109 - MITSUBISHI MATERIALS CORP
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EP 09405077 A 20090506; CH 17712011 A 20100415; CH 2010000101 W 20100415; CN 201080019776 A 20100415; EP 10716257 A 20100415; EP 11009183 A 20100415; EP 11009184 A 20100415; JP 2012508867 A 20100415; US 201013265655 A 20100415