Title (en)

METHOD FOR MANUFACTURING A GOLD ALLOY WIRE

Title (de)

HERSTELLUNGSVERFAHREN EINES DRAHTES AUS EINER GOLDLEGIERUNG

Title (fr)

PROCÉDÉ DE FABRICATION D'UN FIL EN ALLIAGE D'OR

Publication

EP 3165622 A1 20170510 (FR)

Application

EP 16189866 A 20160921

Priority

EP 15193182 A 20151105

Abstract (en)

[origin: CN106676368A] A method for manufacturing a gold alloy wire is provided. The method includes preparing an alloy comprising 33.33-45.83% of Au, 3.64-12.44% of Zn, 18.46-45.02% of Cu, 9.88-33.78% of Ni, and 0.0-5.0% of an element selected from Ir, In, Ti, Si, Ga and Re; manufacturing a continuous casting rod the diameter of which is 8.0-20.0 mm; subjecting the rod to wire rod rolling by limiting the deformation of the section to less than 20% per pass, preferably 13%; measuring the cumulative deformation with respect to the initial section; stopping the wire rod rolling when the cumulative deformation reaches 60% to 75%; annealing; performing wire rod rolling again and repeating wire rod rolling, measurement and annealing until the cross section reaches a required cross section; and drawing an intermediate product to obtain a fracture-surface wire having a round cross section.

Abstract (fr)

Procédé de fabrication d'un fil en alliage d'or: - on compose un alliage comportant de 33,33% à 45,83% d'Au, de 3,64% à 12,44% de Zn, de 18,46% à 45,02% de Cu, de 9,88% et 33,78 % de Ni, et de 0,0 à 5,0% d'éléments parmi Ir, In, Ti, Si, Ga, Re, - on coule en continu une barre, de diamètre de 8,0 à 20,0 mm, - on lamine au fil ladite barre en limitant la déformation de la section à moins de 20% par passe, préférentiellement 13%, - on mesure la déformation cumulée par rapport à la section initiale, - on cesse le laminage au fil quand la déformation cumulée atteint 60% à 75%, on effectue un recuit, - on reprend le laminage au fil et on réitère le processus de laminage au fil, de mesure, et de recuit jusqu'à l'atteinte de la section souhaitée, - on étire le produit intermédiaire pour obtenir un fil profilé de section circulaire.

IPC 8 full level

C22C 30/02 (2006.01); **C22C 5/02** (2006.01); **C22C 9/00** (2006.01); **C22F 1/14** (2006.01)

CPC (source: CN EP RU US)

B21B 1/16 (2013.01 - US); **B21B 3/00** (2013.01 - US); **C22C 5/02** (2013.01 - CN EP US); **C22C 5/04** (2013.01 - RU); **C22C 9/00** (2013.01 - CN); **C22C 30/02** (2013.01 - CN EP US); **C22C 30/06** (2013.01 - CN); **C22F 1/08** (2013.01 - CN); **C22F 1/14** (2013.01 - CN EP RU US); **C22F 1/16** (2013.01 - CN); **G04B 19/042** (2013.01 - EP); **G04B 19/12** (2013.01 - EP); C22C 9/00 (2013.01 - EP US)

Citation (applicant)

"A facile chemical screening method for the détection of stress corrosion cracking in 9 carat gold alloys", GOLD BULLETIN, vol. 42, no. 3, 2009

Citation (search report)

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Designated contracting state (EPC)

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Designated extension state (EPC)

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DOCDB simple family (application)

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