

Title (en)
HIGH-ENTROPY ALLOYS FOR COVERING COMPONENTS

Title (de)
HOCH-ENTROPIE-LEGIERUNGEN FÜR VERKLEIDUNGSKOMPONENTEN

Title (fr)
ALLIAGES A HAUTE ENTROPIE POUR COMPOSANTS D'HABILLAGE

Publication
EP 3543368 A1 20190925 (FR)

Application
EP 18162716 A 20180320

Priority
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Abstract (en)
[origin: JP2019163535A] To provide a high entropy alloy having a composition suitable for an exterior component.SOLUTION: A high entropy alloy contains 4 to 9 major alloy forming elements, in which 3 major alloy forming elements of Cr, Fe and V have atom fraction of 20 to 40% respectively, one or two major alloy forming element selected from Al and Si have atom fraction of 5% or more respectively, total atom fraction of these 2 major alloy forming elements is 25% or less, 0, 1, 2, 3 or 4 major alloy forming element selected from Mn, Mo, Ti and Ni have atom fraction of 5% or more respectively, total atom fraction of these 4 major alloy forming elements is 35% or less, total atom fraction of all of the 4 to 9 major alloy forming elements is 80% or more, and the balance formed by impurities and/or one or a plurality of minor alloy forming elements with atom fraction of less than 5% respectively.SELECTED DRAWING: Figure 1

Abstract (fr)
L'invention concerne un alliage à haute entropie avec une composition contenant entre 4 et 9 éléments principaux choisis parmi la liste constituée du Cr, Fe, V, Al, Si, Mn, Mo, Ti et Ni avec:- 3 éléments principaux qui sont le Cr, Fe et le V ayant chacun une concentration atomique comprise entre 20 et 40%,- 1 ou 2 éléments principaux choisis parmi l'Al et le Si ayant chacun une concentration atomique supérieure ou égale à 5% avec une concentration totale pour ces 2 éléments principaux inférieure ou égale à 25%,- 0, 1, 2, 3 ou 4 éléments principaux choisis parmi le Mn, Mo, Ti et le Ni ayant chacun une concentration atomique supérieure ou égale à 5% avec une concentration atomique totale pour ces 4 éléments principaux inférieure ou égale à 35%,la concentration atomique totale pour les 4 à 9 éléments principaux étant supérieure ou égale à 80%,le solde étant composé d'impuretés éventuelles et/ou d'un ou plusieurs éléments mineurs ayant chacun une concentration atomique inférieure à 5%.

IPC 8 full level
C22C 38/18 (2006.01); **C22C 38/24** (2006.01); **C22C 45/00** (2006.01); **C22C 45/08** (2006.01)

CPC (source: CN EP KR US)
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C22C 38/50 (2013.01 - KR); **C22C 38/58** (2013.01 - KR); **C22C 45/006** (2013.01 - EP US); **C22C 45/008** (2013.01 - EP US);
C22C 45/08 (2013.01 - EP US); **C22F 1/02** (2013.01 - CN); **G04B 37/00** (2013.01 - CN)

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