

Title (en)
Nickel-iron alloy for planar masks

Title (de)
Nickel-Eisen Legierung für Schattenmaske

Title (fr)
Alliage nickel-fer pour masque d'ombre tendu

Publication
EP 0756015 A1 19970129 (FR)

Application
EP 96401346 A 19960620

Priority
FR 9508642 A 19950718

Abstract (en)
Alloy is used to make a mask for use inside a cathode ray tube and comprises 69-83 wt.% Ni, and up to the following amounts of other elements with the residue being Fe: 7% Mo, 8% Cu, 1.5% Co, 7% W, 7% Nb, 7% V, 7% Cr, 7% Ta, 0.1% C, 1% Mn, 1% Si, 1.2% Ti, 1.2% Al, 1.2% Zr, 1.2% Hf and 0.010% S. The following equations also restrict the percentages: $\text{Co} + \text{Ni} + 1.5 \times \text{Cu} \geq 79.5\%$; $3 \times (\text{Co} + \text{Ni}) - 2 \times \text{Cu} \geq 206\%$; $\text{Co} + \text{Ni} + 7 \times \text{Cu} \leq 130\%$; $7 \times (\text{Co} + \text{Ni}) + 2 \times \text{Cu} \leq 581\%$; $\text{Mo} + \text{W} + \text{Nb} + \text{V} + \text{Cr} + \text{Ta} \leq 7\%$; $\text{Ti} + \text{Al} + \text{Zr} + \text{Hf} \leq 1.2\%$; $\text{C} + \text{Mn} + \text{Si} \leq 1\%$; $80.5 \leq \text{Co} + \text{Ni} + 0.80 \times \text{Cu} \leq 81.7\%$. The mask is also claimed.

Abstract (fr)
Utilisation d'une bande en alliage fer-nickel pour la fabrication d'un masque d'ombre tendu d'épaisseur e, exprimée en mm, la composition chimique de l'alliage fer-nickel comprenant, en poids: $69\% \leq \text{Ni} \leq 83\%$, $0\% \leq \text{Mo} \leq 7\%$, $0\% \leq \text{Cu} \leq 8\%$, $0\% \leq \text{Co} \leq 1,5\%$, $0\% \leq \text{W} \leq 7\%$, $0\% \leq \text{Nb} \leq 7\%$, $0\% \leq \text{V} \leq 7\%$, $0\% \leq \text{Cr} \leq 7\%$, $0\% \leq \text{Ta} \leq 7\%$, $0\% \leq \text{C} \leq 0,1\%$, $0\% \leq \text{Mn} \leq 1\%$, $0\% \leq \text{Si} \leq 1\%$, $0\% \leq \text{Ti} \leq 1,2\%$, $0\% \leq \text{Al} \leq 1,2\%$, $0\% \leq \text{Zr} \leq 1,2\%$, $0\% \leq \text{Hf} \leq 1,2\%$, $\text{S} \leq 0,010\%$, le reste étant du fer et des impuretés résultant de l'élaboration; la composition chimique satisfaisant, en outre, les relations: $\text{Co} + \text{Ni} + 1,5 \times \text{Cu} \geq 79,5\%$; $3 \times (\text{Co} + \text{Ni}) - 2 \times \text{Cu} \geq 206\%$; $\text{Co} + \text{Ni} + 7 \times \text{Cu} \leq 130\%$; $7 \times (\text{Co} + \text{Ni}) + 2 \times \text{Cu} \leq 581\%$; $\text{Mo} + \text{W} + \text{Nb} + \text{V} + \text{Cr} + \text{Ta} \leq 7\%$; $\text{Ti} + \text{Al} + \text{Zr} + \text{Hf} \leq 1,2\%$; $\text{C} + \text{Mn} + \text{Si} \leq 1\%$; $80,5 \leq \text{Co} + \text{Ni} + 0,80 \times \text{Cu} \leq 81,7\%$. Masque d'ombre tendu obtenu.

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C22C 19/03 (2013.01 - EP US); **H01J 9/02** (2013.01 - KR); **H01J 29/07** (2013.01 - KR)

Citation (search report)

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- [Y] FR 2081632 A1 19711210 - ALLEGHENY LUDLUM IND INC
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- [Y] PATENT ABSTRACTS OF JAPAN vol. 14, no. 022 (E - 874) 17 January 1990 (1990-01-17)
- [A] PATENT ABSTRACTS OF JAPAN vol. 16, no. 556 (C - 1007) 26 November 1992 (1992-11-26)
- [A] PATENT ABSTRACTS OF JAPAN vol. 94, no. 010

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