

Title (en)

Masking device for a colour flat screen cathode ray tube comprising a tension-type iron-nickel-alloy shadow mask

Title (de)

Maskierungseinrichtung für Flachschirm-Farbbildröhre mit gestreckter Schattenmaske aus Eisen-Nickel-Legierungen

Title (fr)

Dispositif de masquage pour tube cathodique de visualisation en couleur à écran plat à masque d'ombre tendu en alliages Fe-Ni

Publication

EP 1138797 A1 20011004 (FR)

Application

EP 01400812 A 20010329

Priority

FR 0004080 A 20000331

Abstract (en)

A masking device for a cathode tube for a flat colour visual display screen, of the type comprising a support frame and a flat shadow mask subjected to a voltage at ambient temperature is characterised in that the support frame is made of hardened Fe-Ni alloy with a thermal dilation coefficient of 5 asterisk 10<-6>/K between 20 and 150oC and a limit of elasticity at 20oC greater than 700 Mpa and the flat shadow mask is made of Fe-Ni alloy with thermal dilation coefficient of less than 3 asterisk 10<-6>/K. The Fe-Ni alloys are chosen so that below a temperature (T1) the average dilation coefficient between 20oC and the temperature (T1) of the Fe-Ni alloy of the support frame is greater than that of the shadow mask and above a temperature (T1) the average dilation coefficient between 20oC and the temperature (T1) of the Fe-Ni alloy of the support frame is less than that of the shadow mask, where the temperature (T1) is less than 350oC and preferably less than 300oC. An Independent claim is included for a shadow mask made from a Fe-Ni alloy.

Abstract (fr)

Dispositif de masquage pour tube cathodique de visualisation en couleur à écran plat, comprenant un cadre support pour masque d'ombre tendu et un masque d'ombre tendu. Le cadre support est en alliage Fe-Ni durci ayant un coefficient de dilatation thermique entre 20°C et 150°C < à 5x10<-6>/K et une limite d'élasticité Rp0,2 à 20°C >à 700 MPa ; le masque d'ombre tendu est en alliage Fe-Ni ayant un coefficient de dilatation thermique entre 20°C et 150°C < à 3x10<-6>/K ; les alliages Fe-Ni sont choisis de telle sorte que : en dessous d'une température T1, le coefficient de dilatation moyen α20-T, entre 20°C et T, de l'alliage du cadre support est > au coefficient de dilatation moyen α20-T de l'alliage du masque d'ombre, au dessus de T1, le coefficient α20-T, de l'alliage du cadre est < au coefficient α20-T de l'alliage du masque d'ombre. Avec T1 < 350°C, et de préférence < 300°C.

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IPC 8 full level

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CPC (source: EP KR US)

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