

Title (en)

Cathode subassembly and color crt equipped therewith

Title (de)

Kathodenbaugruppe und Farbkathodenstrahlröhre mit solcher Baugruppe

Title (fr)

Sous-ensemble de cathode et tube à rayons cathodiques de couleur muni d'un tel sous-ensemble

Publication

EP 1063668 A2 20001227 (EN)

Application

EP 00401786 A 20000622

Priority

JP 17500999 A 19990622

Abstract (en)

A cathode subassembly for color CRTs is provided, which exhibits scarcely the degradation of electron emission capability for at least ordinary lifetime of color CRTs even at a high current density greater than 1 A/cm² while it has an equivalent activation time and an equivalent operating temperature to those of former oxide cathodes. The cathode subassembly is comprises (a) a porous cathode pellet (11) formed by a sintered body containing Ni, scandium oxide (Sc₂O₃), and an electron-emissive material; the body being made by sintering a mixture of a Ni powder, a scandium oxide (Sc₂O₃) powder, and an electron-emissive material powder using a HIP process; the pellet having an electron emission surface; and (b) a pellet support (12) for supporting the pellet; the support having a part in contact with the pellet; the part being made of an alloy containing Ni as its main ingredient and at least one metal selected from the group consisting of chromium (Cr), tantalum (Ta), molybdenum (Mo), zirconium (Zr), tungsten (W), and cobalt (Co); the at least one metal selected from the group consisting of Cr, Ta, Mo, Zr, W, and Co serving as a reducing agent for the electron-emissive material. Preferably, the electron-emissive material is a carbonate generated by co-precipitation of Ba, Sr, and Ca. <IMAGE>

IPC 1-7

H01J 1/142; **H01J 1/28**; **H01J 1/26**

IPC 8 full level

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CPC (source: EP KR)

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Cited by

CN113808892A; EP1367620A1; FR2840450A1; US6624578B2; EP2485238A4; US6979942B2; US6833679B2; US6903519B2; US6906470B2

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