

Title (en)  
ELECTRON TUBE CATHODE AND METHOD OF ITS MANUFACTURE

Publication  
**EP 0421372 A3 19911121 (EN)**

Application  
**EP 90118910 A 19901003**

Priority  
JP 26236889 A 19891006

Abstract (en)  
[origin: EP0421372A2] An electrode tube cathode (1) having improved electron emission properties is produced by suspending an alkaline earth metal carbonate powder and scandium oxide powder in a solution of nitrocellulose, regulating their particle size, applying the suspension on a nickel base metal surface (1b) such that the coating density is not greater than 2 mg/mm<3>, and heating the layer of the carbonate in vacuum to a temperature of 800 - 1200 DEG C to decompose to the oxide, thereby forming a porous electron emission layer (30) wherein scandium oxide is dispersed in an alkaline earth metal oxide on the base metal. The resultant electron emission layer (30) has a porous structure, and hence the stress between the layer and the base is reduced. This appears to suppress the swelling of the layer and the peeling of it away from the surface of the base.

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**H01J 1/28**; **H01J 9/04**

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CPC (source: EP KR)  
**H01J 1/14** (2013.01 - KR); **H01J 1/28** (2013.01 - EP); **H01J 9/042** (2013.01 - EP)

Citation (search report)  
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DE FR NL

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