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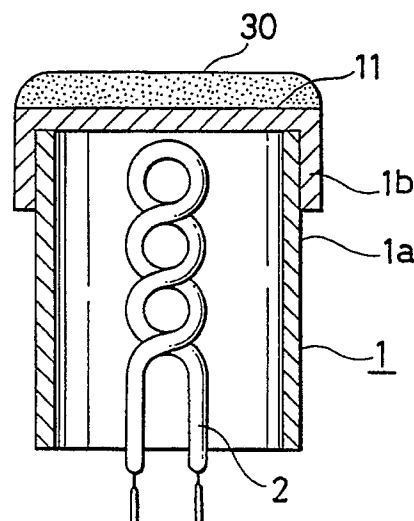
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Electron tube cathode and method of its manufacture.

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/mm³, and heating the layer of the carbonate in vacuum to a temperature of 800 - 1200° 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.

FIG. 1





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EUROPEAN SEARCH REPORT

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EP 90 11 8910

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
D,A	EP-A-0 204 477 (MITSUBISHI DENKI K.K.) * Abstract; figures 1,3A,3B; page 1, line 21 - page 11, line 9; claims 1-8,12-14 * -- --	1-5,8-15	H 01 J 1/28 H 01 J 9/04 H 01 J 1/14
A	US-A-2 726 178 (H. NELSON et al.) * Column 1, lines 60-64; column 2, lines 17-23; column 4, line 70 - column 5, line 9 * -- --	1,6-8,11, 12	
A	US-A-4 411 827 (D.M. CORNEILLE) * Entire document * -- --	4,10	
A	EP-A-0 327 074 (MITSUBISHI DENKI K.K.) * Abstract; figures 1,2,5,6; column 6, line 28 - column 8, line 29; column 7, lines 16-43 * -- -- -- --	8,9,13	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			H 01 J
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 04 September 91	Examiner CLARKE N.S.
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons ----- &: member of the same patent family, corresponding document			