

EUROPEAN PATENT APPLICATION

Application number: 89300425.9

Int. Cl.⁵: **H01J 1/15**

Date of filing: 18.01.89

Priority: 26.01.88 GB 8801633

Applicant: **EEV LIMITED**
106 Waterhouse Lane
Chelmsford, Essex, CM1 2QU(GB)

Date of publication of application:
02.08.89 Bulletin 89/31

Inventor: **Pickering, Alan Hugh**
Wellbeck Pump Lane Springfield
Chelmsford Essex(GB)

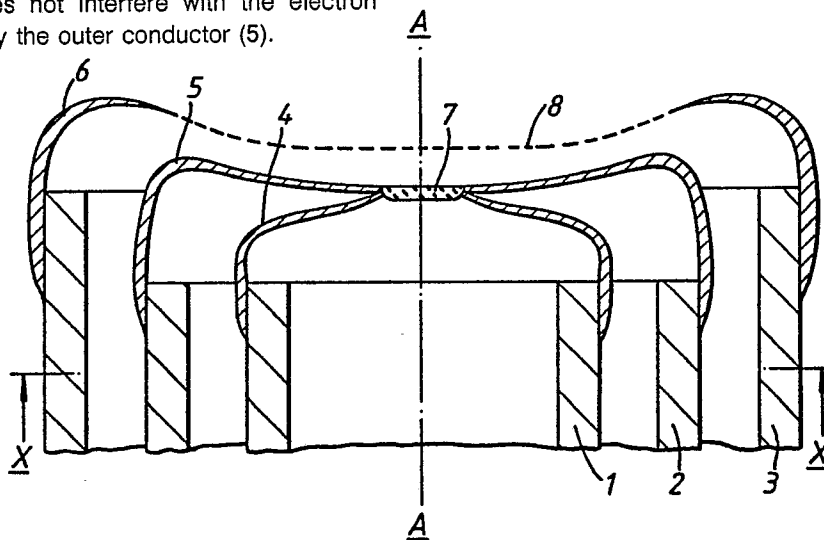
Designated Contracting States:
AT BE CH DE ES FR GR IT LI LU NL SE

Date of deferred publication of the search report:
11.07.90 Bulletin 90/28

Representative: **Loven, Keith James et al**
GEC plc Patent Dept.(Chelmsford Office)
GEC-Marconi Research Centre West
Hanningfield Road
Great Baddow Essex CM2 8HN(GB)

Directly heated cathodes.

A directly heated cathode for generating an electron beam along an axis (A) comprises two nested, dish-shaped conductors (4,5) on the axis joined electrically and mechanically on the axis by a spot weld (7), and supported by respective co-axial cylinders (1,2). A heater current supplied by the cylinders (1,2) flows between the conductor rims by way of the spot weld (7), and does not interfere with the electron beam generated by the outer conductor (5).



EP 0 326 273 A3

FIG.1.



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.4)
X	US-A-1 757 233 (BOL) * Figures 1,2; page 1, lines 46-52,66-72; page 1, line 97 - page 2, line 4; page 2, lines 55-58,63-70 *	1,4,5	H 01 J 1/15
A	FR-A- 692 167 (WIEKSZYNSKI et al.) * Figures 1-3; page 1, lines 9-15,19-34 *	1	
A	US-A-3 461 338 (VOGEL) * Figures 2,3; column 1, lines 12-18; column 2, lines 11-23 *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H 01 J 1/00 H 01 J 17/00 H 01 J 19/00 H 01 J 29/00
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 05-04-1990	Examiner COLVIN G.G.
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	

EPO FORM 1503 03.82 (P/901)