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(11) Publication number:

0 149 337
A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 84308697.6

(51) Int. Cl.⁴: **H 05 G 1/06**
H 05 G 1/10, H 05 G 1/52

(22) Date of filing: 19.12.84

(30) Priority: 16.01.84 US 570888

(43) Date of publication of application:
24.07.85 Bulletin 85/30

(88) Date of deferred publication of search report: 04.06.86

(84) Designated Contracting States:
DE FR GB NL

(71) Applicant: PICKER INTERNATIONAL, INC.
595 Miner Road
Highland Heights Ohio 44143(US)

(72) Inventor: Palermo, Anthony
1715 Biltamy Boulevard
South Euclid, Ohio 44121(US)

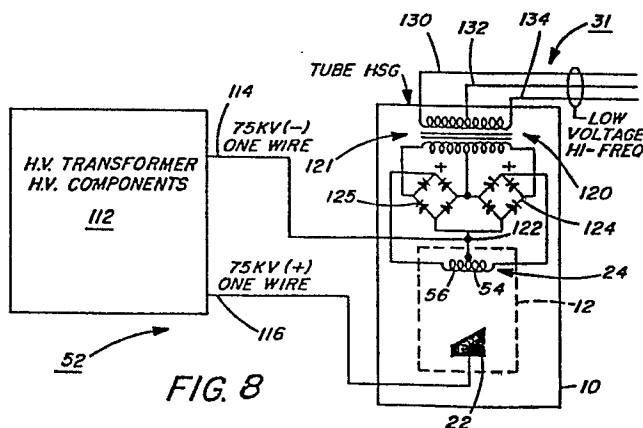
(74) Representative: Pope, Michael Bertram Wingate
Central Patent Department Wembley Office The General
Electric Company, p.l.c. Hirst Research Centre East Lane
Wembley Middlesex HA9 7PP(GB)

(54) X-ray generating apparatus and method of operating an X-ray tube.

(57) An X-ray generating apparatus with a filament energizing transformer (Figure 8: 120, 121; Figure 9: 184) mounted inside the X-ray tube housing (11) while a high voltage generating transformer (112) remains outside that housing (11). This arrangement allows a single high magnitude negative polarity input (114) to be routed through the tube housing (11) and coupled to the tube cathode (24).

In one embodiment of the invention two cathode filaments (54, 56) are each energized when in use by an associated one of two filament transformers (120, 121) inside the housing (11). Selective energization of one or the other transformers determines which filament is to be energized. In an alternate embodiment a frequency sensing electronic switch (188) chooses which filament (54, 56) to energize depending on the energization frequency input to a single filament transformer (184).

A method of operating an X-ray tube is also provided.





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EUROPEAN SEARCH REPORT

01 49337
Application number

EP 84 30 8697

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)
Y	EP-A-0 063 183 (PENNWALT CORPORATION) * Page 13, line 14 - page 16, line 3; figures 1,3 *	1, 9, 11	H 05 G 1/06 H 05 G 1/10 H 05 G 1/52
Y	US-A-4 315 154 (W. WEIGL et al.) * Column 2, lines 20-35; column 3, lines 14-47; column 5, lines 4-50; figure 2 *	1-9, 11, 12	
A	US-A-4 065 689 (V.W. PLEIL) * Column 7, line 35 - column 8, line 56; figures 2,6,7 *	1, 2, 4, 6, 8, 9, 11	
A	US-A-3 103 591 (T.H. ROGERS et al.) * Column 6, line 33 - column 7, line 20; figures 1,8,9 *	1, 2, 4, 6, 8, 9, 11	TECHNICAL FIELDS SEARCHED (Int. Cl. 4) H 01 J 35/00 H 05 G 1/00
A	FR-A-2 474 804 (SIEMENS AG) * Page 1, line 37 - page 2, line 22; figure * & US - A - 4 446 569	1, 2, 4-6, 9-11	
A	US-A-3 110 810 (J. FRANSEN) * Column 2, line 33 - column 3, line 69; figures 3,4 *	1-4, 6-9, 11	
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21-02-1986	Examiner HORAK G.I.
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			





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DOCUMENTS CONSIDERED TO BE RELEVANT			Page 2
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
A,D	US-A-4 109 151 (V.W. PLEIL) * Column 3, lines 13-44; column 7, lines 17-65; figure 5 * -----	1,2,6, 8,9,11	
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
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