

Title (en)

X-RAY TUBE WITH ION DEFLECTING AND COLLECTING DEVICE MADE FROM A GETTER MATERIAL

Title (de)

RÖNTGENRÖHRE MIT IONENDEFLEKTIONS- UND ERFASSUNGSVORRICHTUNG AUS EINEM GETTER-MATERIAL

Title (fr)

TUBE À RAYONS X À DISPOSITIF DE DÉVIATION ET DE COLLECTE FABRIQUÉ À PARTIR D'UN MATÉRIAU GETTER

Publication

EP 2082411 A2 20090729 (EN)

Application

EP 07826703 A 20071010

Priority

- IB 2007054121 W 20071010
- EP 06122319 A 20061016
- EP 07826703 A 20071010

Abstract (en)

[origin: WO2008047267A2] It is described an X-ray tube (100) comprising an ion manipulation arrangement (140) having at least one ion collector electrode (141). The ion collector electrode (141) is made at least partially from a getter material. The ion manipulation arrangement (140) is in particular beneficial for high-end X-ray-tubes including an electrical field-free region (131). The ion manipulation arrangement (140) produces an electrical field, which deflects ions (150). When impinging onto the getter electrode (141) the ions (150) are permanently collected and thus removed from the interior of an evacuated envelope of the X-ray tube (100). This avoids ion bombardment on an electron emitter (111) of the X-ray tube (100). Additionally the arcing rate caused by residual gas can be reduced significantly. A heating of the getter material may be realized with heating wires or by a defined bombardment of scattered electrons (322) onto the electrodes (341, 342) comprising the getter material.

IPC 8 full level

H01J 35/04 (2006.01); **H01H 1/48** (2006.01); **H01J 3/26** (2006.01); **H01J 7/18** (2006.01); **H01J 35/20** (2006.01)

CPC (source: EP)

H01J 7/18 (2013.01); **H01J 35/04** (2013.01); **H01J 35/20** (2013.01); **H01J 41/12** (2013.01); **H01J 2235/205** (2013.01)

Citation (search report)

See references of WO 2008047267A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2008047267 A2 20080424; **WO 2008047267 A3 20080904**; CN 101523543 A 20090902; EP 2082411 A2 20090729; JP 2010507188 A 20100304

DOCDB simple family (application)

IB 2007054121 W 20071010; CN 200780038402 A 20071010; EP 07826703 A 20071010; JP 2009531964 A 20071010