

Title (en)

Sealed neutron tube equipped with a multicellular ion source with magnetic confinement.

Title (de)

Mit einer multizellulären Ionenquelle mit magnetischem Einschluss versehene abgeschmolzene Neutronenröhre.

Title (fr)

Tube neutronique scellé équipé d'une source d'ions multicellulaire à confinement magnétique.

Publication

EP 0362947 B1 19950426 (FR)

Application

EP 89202465 A 19891002

Priority

FR 8813187 A 19881007

Abstract (en)

[origin: EP0362947A1] Sealed neutron tube containing a deuterium-tritium gas mixture under low pressure from which an ion source furnishes an ionised gas channelled by an electron-confining magnetic field created by magnets (8), the said source emitting ion beams (3) which cross an extraction-acceleration electrode (2) in order to be projected onto a target (4) and produce thereat a fusion reaction causing an emission of neutrons. According to the invention, the ion source is of multi-cellular type consisting of n Penning type cells comprising a multi-aperture anode (6) disposed inside the cathodic cavity (7) so as to increase the ion current. The shape and/or the dimensions and/or the positioning of the multi-aperture anode are adapted to the topology of the magnetic field. <??>Application to neutron generators. <IMAGE>

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H05H 3/06; **H01J 27/04**

IPC 8 full level

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CPC (source: EP US)

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Cited by

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