

Title (en)
Electron accelerator

Title (de)
Elektronenbeschleuniger

Title (fr)
Accélérateur d'électrons

Publication
EP 1089602 A1 20010404 (EN)

Application
EP 99250345 A 19990928

Priority
EP 99250345 A 19990928

Abstract (en)
The invention relates to an electron accelerator used in the irradiation of various substances. The accelerator includes a source of electrons (ES) and a toroidal cavity (TC), having a rotation axis (A), said toroidal cavity (TC) being connected with a high frequency source (SHF), which excites the azimuthal homogenous distribution for electromagnetic fields (E) in the cavity (TC), and on the accelerating radius (Ra) the electric field component (E) being parallel to said rotation axis (A) of the cavity (TC) and the magnetic field component (M) being equal to zero and said source of electrons (ES) injecting the electron beam (F) into the cavity (TC) along a first axis (A1) and the beam (F) crossing the cavity (TC) without changing the direction of motion and for the purpose of multiple acceleration in the cavity (TC) deflectors (D1, D2, D3) being placed outside the cavity (TC) and entrances (111, 211, 311) and exits (200, 300, 400) of the deflectors (D1, D2, D3) being located on axes (A1, A2, A3) of the beam (F) crossing the cavity (TC) which are parallel to the rotation axis (A) of the cavity (TC) and, different from each other, disposed on the cylindrical surface with an accelerating radius (Ra) and its rotation axis identical to said rotation axis (A). <IMAGE>

IPC 1-7
H05H 7/18; **H05H 15/00**

IPC 8 full level
H05H 7/18 (2006.01); **H05H 13/10** (2006.01); **H05H 15/00** (2006.01)

CPC (source: EP)
H05H 7/18 (2013.01); **H05H 13/10** (2013.01); **H05H 15/00** (2013.01)

Citation (search report)

- [DA] FR 1555723 A 19690131
- [A] FR 2684512 A1 19930604 - COMMISSARIAT ENERGIE ATOMIQUE [FR]

Cited by
FR2815810A1; WO2008138998A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 1089602 A1 20010404; **EP 1089602 B1 20040211**; AR 025904 A1 20021218; AT E259577 T1 20040215; AU 7659800 A 20010430; DE 69914750 D1 20040318; DE 69914750 T2 20041202; WO 0124592 A1 20010405

DOCDB simple family (application)
EP 99250345 A 19990928; AR P000105133 A 20000928; AT 99250345 T 19990928; AU 7659800 A 20000927; DE 69914750 T 19990928; EP 0009449 W 20000927