

Title (en)
INERTIAL ELECTROSTATIC CONFINEMENT (IEC) FUSION DEVICE WITH GATE-VALVE PULSING

Title (de)
ELEKTROSTATISCHE TRÄGHEITS-EINSCHLUSSVORRICHTUNG MIT IMPULSGESTEUERTEM SCHIEBERVENTIL

Title (fr)
DISPOSITIF DE FUSION PAR CONFINEMENT INERTIEL ELECTROSTATIQUE (IEC) A CLAPET OBTURATEUR A EMISSION D'IMPULSIONS

Publication
EP 1048038 A2 20001102 (EN)

Application
EP 98964691 A 19981112

Priority
• US 9824034 W 19981112
• US 6480197 P 19971112

Abstract (en)
[origin: WO9924990A2] A pulsed neutron/proton source based upon the design of a steady-state spherical inertial electrostatic confinement (IEC) configuration and using a pulsed gate valve grid (GVP). The IEC-GVP device comprises a grounded conductive vessel, serving as an anode, and a central cathode or primary grid that is connected to a high voltage source. In addition, an intermediate second grid and an outside third grid are disposed concentrically with the central cathode within the vessel. Electron extractor/emitter devices are disposed substantially symmetrically about the perimeter of the vessel and include electron extractor deflector grids and electron emitters that contribute to the enhanced timed ion flow in the device. Two techniques for pulsing the second grid are used. A first is a low repetition rate GVP (LR-GVP) operation and a second is a tuned high-frequency pulsing, termed Resonant Ion Driven Oscillation (RIDO) GVP operation.

IPC 1-7
G21G 1/00

IPC 8 full level
H05H 3/06 (2006.01); **G21B 1/03** (2006.01)

CPC (source: EP KR)
G21B 1/00 (2013.01 - KR); **H05H 3/06** (2013.01 - EP); **Y02E 30/10** (2013.01 - EP)

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)
WO 9924990 A2 19990520; WO 9924990 A3 19990923; AU 1995899 A 19990531; CA 2310071 A1 19990520; CN 1294742 A 20010509; EE 200000528 A 20020215; EP 1048038 A2 20001102; HU P0100180 A1 20010730; IL 136099 A0 20010520; JP 2001523010 A 20011120; KR 20010032046 A 20010416; NO 20002437 D0 20000511; NO 20002437 L 20000711

DOCDB simple family (application)
US 9824034 W 19981112; AU 1995899 A 19981112; CA 2310071 A 19981112; CN 98813023 A 19981112; EE P200000528 A 19981112; EP 98964691 A 19981112; HU P0100180 A 19981112; IL 13609998 A 19981112; JP 2000519899 A 19981112; KR 20007005167 A 20000512; NO 20002437 A 20000511