

Title (en)
METHOD FOR GENERATING ENERGY BY CONTROLLED PLASMA-INDUCED NUCLEAR FUSION AND DEVICE FOR THE IMPLEMENTATION OF SAID METHOD

Title (de)
VERFAHREN ZUR ENERGIEGEWINNUNG MIT PLASMAINDUZIERTER, KONTROLLIERTER KERNFUSION SOWIE VORRICHTUNG ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)
PROCEDE DE PRODUCTION D'ENERGIE PAR FUSION NUCLEAIRE CONTROLEE INDUITE AU PLASMA, ET DISPOSITIF POUR LA MISE EN OEUVRE DE CE PROCEDE

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Application
EP 98954158 A 19980911

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Abstract (en)
[origin: DE19741515A1] The invention relates to a method for generating energy by controlled plasma-induced nuclear fusion and to a device for the implementation of the inventive method. Unlike suggested in large-scale fusion research, the inventive method provides for the ions to be heated selectively with ion cyclotron resonance by means of an electrical, resonant high frequency field impregnating the plasma in a large resonance volume containing at least 0.4 % of the total plasma volume. The intensity of the resonance magnetic field in the resonance volume remains constant, the differences being no greater or smaller than 1 %. The magnetic field strength from the resonance volume increases in all external directions. This enables efficient, selective ion heating whilst the electrons are cold. In contrast with existing and projected fusion plasma machines, ions with high kinetic energy in the spatial area of the minimum quantity of the magnetic field structure can be stored over a long period of time with little technical and economic expenditures and in relatively small volumes so that a stationary controllable fusion energy yield is achieved, whereby the heating of ions can be increased by inserting ions in the magnetic field structure.

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