

Title (en)

Plasma accelerator with closed electron drift.

Title (de)

Plasmabeschleuniger mit geschlossener Elektronenlaufbahn.

Title (fr)

Accélérateur de plasma avec parcours fermé d'électrons.

Publication

EP 0541309 A1 19930512 (EN)

Application

EP 92309991 A 19921030

Priority

- SU 5018122 A 19911104
- SU 5055718 A 19920903
- US 86614992 A 19920409

Abstract (en)

Internal and external magnetic screens (4,5) made of magnetic permeable material are added between the discharge chamber (3) and the internal and external sources of magnetic field (9,10), respectively. A longitudinal gap is maintained between the screens and their respective internal and external poles, that does not exceed half the distance between the internal and external poles. The exit end part of the internal magnetic screen is placed closer to the middle point of the accelerating channel than the internal pole. The walls of the exit end part of the discharge chamber are constructed with an increased thickness, and extend beyond the planes that the poles lay. The magnetic screens (4,5) can be located with a gap relative to the magnetic path if connected by a bridge between the screens. The discharge chamber (3), the anode (1), and the magnetic system are symmetrically designed relative to two mutually perpendicular longitudinal planes. Thus, the external pole (6) and the external screen (5) are made into four symmetrical parts relative to the planes; and the external sources of the magnetic field are made with four magnetic coils (10,10,10), each coil connected with one part of the external pole. The discharge chamber (3) is connected to the external pole with a holder (17) at its front part. The holder, with the exception of the locations of attachment, is situated with a gap relative to the discharge chamber and the external pole. <IMAGE>

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F03H 1/00; **H05H 1/54**

IPC 8 full level

F03H 1/00 (2006.01); **H05H 1/54** (2006.01)

CPC (source: EP)

F03H 1/0075 (2013.01); **H05H 1/54** (2013.01)

Citation (search report)

- [AP] EP 0463408 A2 19920102 - HAUZER TECHNO COATING EUROP BV [NL]
- [A] SOVIET PHYSICS TECHNICAL PHYSICS. vol. 23, no. 9, September 1978, NEW YORK US pages 1055 - 1057 BISHAEV A. M. 'LOCAL PLASMA PROPERTIES IN A HALL-CURRENT ACCELERATOR WITH AN EXTENDED ACCELERATION ZONE'

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