Title (en)

Closed electron drift plasma thruster adapted to high thermal loads

Title (de)

Auf hohen thermischen Belastungen abgestimmter Plasmamotor mit geschlossenem Elektronendrift

Title (fr)

Propulseur à plasma à dérive fermée d'électrons adapté à de fortes charges thermiques

Publication

EP 0982976 B1 20040225 (FR)

Application

EP 99401981 A 19990804

Priority

FR 9810674 A 19980825

Abstract (en)

[origin: CA2280479A1] The closed electron drift plasma thruster uses a magnetic circuit to create a magnetic field in a main annular channel (124) for ionization and acceleration, said magnetic circuit comprises: an essentially radial first outer pole piece (134); a conical second outer pole piece (311); an essentially radial first inner pole piece (135); a conical second inner pole piece (351); a plurality of outer magnetic cores (137) surrounded by outer coils (131) to interconnect the first and second outer pole pieces (134, 311); an axial magnetic core (138) surrounded by a first inner coil (133) and connected to the first inner pole piece (135); and a second inner coil (132) placed upstream from the outer coils (131). The thruster also comprises a plurality of radial arms (352, 136) included in the magnetic circuit, and a structural base (175) which is separate from the magnetic circuit and which serves, amongst other things, to cool the coils (131, 132, 133).

IPC 1-7

H05H 1/54; F03H 1/00

IPC 8 full level

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

CPC (source: EP US)

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Cited by

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