Title (en)

ELECTRONEGATIVE PLASMA THRUSTER WITH OPTIMIZED INJECTION

Title (de)

ELEKTRONEGATIVES PLASMATRIEBWERK MIT OPTIMIERTER EINSPRITZUNG

Title (fr)

PROPULSEUR A PLASMA ELECTRONEGATIF A INJECTION OPTIMISEE

Publication

EP 2359001 B1 20171004 (FR)

Application

EP 09756319 A 20091124

Priority

- EP 2009065688 W 20091124
- FR 0858077 A 20081128

Abstract (en)

[origin: WO2010060887A1] The invention relates to a plasma thruster involving the extraction of a stream of positive ions, characterized in that it comprises: - a single ionisation stage; - means of injecting ionisable gas for said ionisation stage, said means comprising at least first means of injecting a first gas (G1) and second means of injecting an electronegative second gas (G2); - means of creating an electrical field (Pe, RF) so as to cause the gases to ionise in the ionisation stage, said means creating a first zone known as a hot zone in the ionisation stage, whereby the first gas is distributed in the first zone (Z1) known as the hot zone and the second gas is distributed in a second zone (Z2) that is not as hot as the first zone; - first means (40) of extracting a stream of negative ions and second means (50) of extracting a stream of positive ions, which are both connected to the ionisation stage, the extraction of a stream of positive ions and the extraction of a stream of negative ions ensuring that the thruster is electrically neutral.

IPC 8 full level

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

CPC (source: EP US)

F03H 1/0012 (2013.01 - EP US); **F03H 1/0025** (2013.01 - EP US); **H05H 1/54** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

FR 2939173 A1 20100604; **FR 2939173 B1 20101217**; EP 2359001 A1 20110824; EP 2359001 B1 20171004; US 10233912 B2 20190319; US 2011232261 A1 20110929; WO 2010060887 A1 20100603

DOCDB simple family (application)

FR 0858077 A 20081128; EP 09756319 A 20091124; EP 2009065688 W 20091124; US 200913131366 A 20091124