



New connection on: : 14-09-2018 : 14:48:49 - Last disconnection on: : 13-09-2018 : 16:52:57

V 4.0.0.44358(LP,U,linux) (Rev:43856 2017-04-27 09:03:29 +0200#(D201802)) (RPM D201802)

Welcome to EPOQUE Rebuild under the Production Environment

[No database/cluster active] ..fi epodoc

 Database: EPODOC

[EPODOC: SS 1] RF and resonant and cavity and thruster and antenna and electromagnetic

Results in EPODOC 0

[SS 2] RF and resonant

Results in EPODOC 2.535

[SS 3] 2 and cavity

Results in EPODOC 339

[SS 4] 3 and thruster

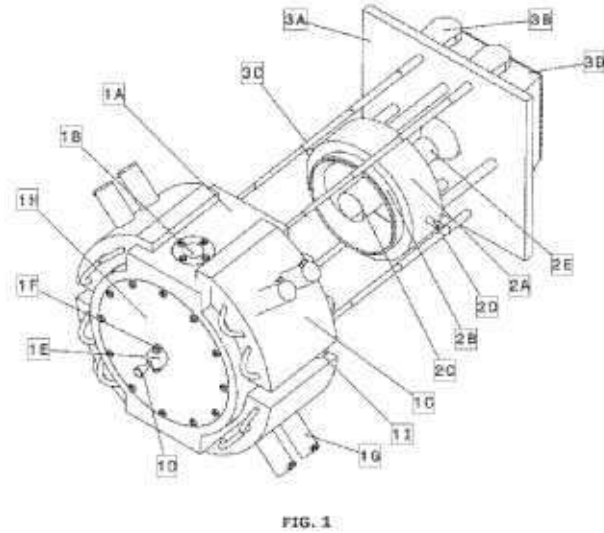
Results in EPODOC 1

[SS 5] ..li



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PN - [WO2017085746](#) A1 20170526
 PNFP - WO2017085746 A4 20170803
 PR - IN2015MUM4333 20151118
 AP - WO2016IN50409 20161117
 DT - *; Rep
 CT - |US| ISR (A1)
 [US5956938](#) A 19990928
 [Y] (BRANDENBURG JOHN E [US])
 [Y] 1
 * ; figure 1; column 2, lines 55-67; column 3, lines 35-40 *;
 [US3366805](#) A 19680130
 [Y] (BEAR MARSHALL D, et al)
 [Y] 1
 * ; column 1, lines 20-25; column 2, lines 25-35 *;
 [US4507588](#) A 19850326
 [A] (ASMUSSEN JES [US], et al)
 [A] 1-19
 * ; entire document *;
 [WO2005028310](#) A2 20050331
 [A] (ELWING LLC [US], et al)
 [A] 1-19
 * ; entire document *;
 [US5146742](#) A 19920915
 [A] (IIDA HIROSHI [JP], et al)
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 [A] (ASMUSSEN JES [US])
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 [A] (EMSELLEM GREGORY [FR], et al)
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 CCI - [F03H1/0093](#)
 CUI - [B64G1/40](#) ; [B64G1/42](#)
 PA - (A1 A4)
 JSW STEEL LTD [IN]
 TI - (A1 A4)
 A MICROWAVE
 ELECTROTHERMAL **THRUSTER**
 ADAPTED FOR IN-SPACE
 ELECTROTHERMAL PROPULSION
 AB - (A1 A4)



The present invention relates to
a Microwave
Electrothermal **Thruster** (MET)
adapted for in-space
electrothermal propulsion
comprising a tunable frequency
Microwave
Electrothermal **Thruster**
propulsion module enabling
primary propulsion and altitude
control of a satellite/spacecraft
wherein **RF** Semiconductors is
introduced for the first time as
microwave generator
inside **cavity** body to increase its
efficiency and respond time and
to make the **thruster** capable of
operating in two frequencies by
mechanically tuning its **cavity**
making such **thruster** compact
and light weight. The free-
floating plasma within
the **resonant cavity** couples the
incident electrical power directly
to the tangentially injected
propellant gas. The plasma
forms by focusing the microwave
energy into the first transverse
magnetic mode and operates
independent of the type of
propellant gas used. Also, for the
first time, Shape Memory Alloy is
introduced into the **thruster**
cavity to enable faster and
effective tuning of the **resonant**
cavity diameter, when switching
between two operational
frequencies.