

Title (en)
PLASMA GUN AND METHODS FOR THE USE THEREOF

Title (de)
PLASMABRENNER UND VERFAHREN ZUR VERWENDUNG

Title (fr)
CANON A PLASMA ET SES PROCEDES D'UTILISATION

Publication
EP 1173874 A4 20070411 (EN)

Application
EP 00921371 A 20000308

Priority
• US 0006009 W 20000308
• US 28313599 A 19990331
• US 35257199 A 19990713

Abstract (en)
[origin: WO0058989A1] A high pulse repetition frequency (PRF) plasma gun is provided, which gun inlets (74) a selected propellant gas into a column (16) formed between a center electrode (12) and a coaxial outer electrode (14), utilizes a solid state high repetition rate pulse driver (130) to provide a voltage across the electrodes (12, 14) and provides a plasma initiator (82) at the base of the column (16), which is normally operative when the driver is fully charged. For preferred embodiments, the initiator (82) includes a solid state simulated RF driver (130), the output is applied to the electrodes (91) affixed in an insulator (72) and producing a high voltage field at a surface of the insulator (72) which forms part of the base end of the column (16).

IPC 1-7
H01J 7/24; **H05B 31/26**

IPC 8 full level
B64G 1/40 (2006.01); **F03H 1/00** (2006.01); **H01J 7/24** (2006.01); **H05B 31/26** (2006.01); **H05G 2/00** (2006.01); **H05H 1/24** (2006.01); **H05H 1/54** (2006.01)

CPC (source: EP KR)
B64G 1/405 (2023.08 - EP); **F03H 1/0087** (2013.01 - EP); **H01J 27/16** (2013.01 - KR); **H05G 2/003** (2013.01 - EP); **H05G 2/005** (2013.01 - EP); **H05H 1/52** (2013.01 - EP); **H05H 1/54** (2013.01 - EP)

Citation (search report)
• [XY] US 5866871 A 19990202 - BIRX DANIEL [US]
• [Y] GB 2201051 A 19880817 - ELECTRICITY COUNCIL
• [A] RU 2010467 C1 19940330 - KATAEV IVAN G [RU], et al
• [E] US 6084198 A 20000704 - BIRX DANIEL [US]
• [Y] GIORDANO G ET AL: "Magnetic pulse compressor for prepulse discharge in spiker-sustainer excitation technique for XeCl lasers", REVIEW OF SCIENTIFIC INSTRUMENTS USA, vol. 65, no. 8, August 1994 (1994-08-01), pages 2475 - 2481, XP002400606, ISSN: 0034-6748
• See references of WO 0058989A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 0058989 A1 20001005; **WO 0058989 A8 20010927**; CA 2362890 A1 20001005; CA 2362890 C 20051213; EP 1173874 A1 20020123; EP 1173874 A4 20070411; HK 1041556 A1 20020712; JP 2003517704 A 20030527; JP 2004335479 A 20041125; JP 3564396 B2 20040908; JP 4223989 B2 20090212; KR 100637816 B1 20061025; KR 20030015117 A 20030220

DOCDB simple family (application)
US 0006009 W 20000308; CA 2362890 A 20000308; EP 00921371 A 20000308; HK 02103241 A 20020430; JP 2000608400 A 20000308; JP 2004145027 A 20040514; KR 20017012523 A 20000308