

Title (en)

Small-sized atmospheric plasma generating apparatus and surface processing method using the apparatus

Title (de)

Vorrichtung in Kleinbauweise zur Erzeugung eines atmosphärischen Plasmas und Verfahren zur Oberflächenbehandlung

Title (fr)

Dispositif de dimensions réduites pour engendrer un plasma atmosphérique et procédé de traitement de surfaces en faisant usage

Publication

EP 0789505 A1 19970813 (EN)

Application

EP 97101968 A 19970207

Priority

- JP 2387296 A 19960209
- JP 32140896 A 19961202

Abstract (en)

The plasma generating apparatus (1) is provided with a simple switching circuit (3) for generating AC power of high frequency by a magnet (16) for switch driving use for repeating the excitation and the demagnetization by AC power and a contact switch (S) to be opened or closed by the magnet (16), a simple voltage transforming circuit (4) for converting AC power of high frequency outputted from the switching circuit (3) into AC power of high voltage, a discharge electrode (5) for receiving AC power of high frequency and high voltage outputted from the voltage transforming circuit (4) to cause corona discharging, when the opposite electrode has been approached, to cause the plasma. The plasma producing apparatus (1) is easier to be carried, because the switching circuit (3), the voltage transforming circuit (4), and the discharge electrode (5) are respectively simple, compact in construction. The apparatus (1) becomes smaller in power capacity and is reduced in cost. <IMAGE>

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H05H 1/24

IPC 8 full level

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CPC (source: EP US)

B05B 17/0607 (2013.01 - EP); **H05H 1/2406** (2013.01 - EP US); **H05H 1/2418** (2021.05 - EP); **H05H 1/47** (2021.05 - EP); **H05H 2245/42** (2021.05 - EP)

Citation (search report)

- [A] US 5249575 A 19931005 - DI MINO ALFONSO [US], et al
- [A] DATABASE WPI Section Ch Week 8414, Derwent World Patents Index; Class M13, AN 84-084296, XP002031061
- [A] DATABASE WPI Section Ch Week 9403, Derwent World Patents Index; Class E36, AN 94-022590, XP002031062
- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 579 (C - 668) 20 December 1989 (1989-12-20)
- [A] DATABASE WPI Section Ch Week 9126, Derwent World Patents Index; Class A35, AN 91-188531, XP002031063
- [A] DATABASE WPI Section Ch Week 8332, Derwent World Patents Index; Class J01, AN 83-733577, XP002030623
- [A] PATENT ABSTRACTS OF JAPAN vol. 013, no. 003 (C - 557) 6 January 1989 (1989-01-06)
- [A] DATABASE WPI Section Ch Week 9428, Derwent World Patents Index; Class A35, AN 94-227983, XP002031064

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WO2009003613A1; CN114247576A; CN103458600A; US2012107896A1

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