Title (en)

THREE-PHASE PLASMA GENERATOR HAVING ADJUSTABLE ELECTRODES

Title (de)

DREIPHASEN-PLASMAGENERATOR MIT EINSTELLBAREN ELEKTRODEN

Title (fr)

GENERATEUR DE PLASMA TRIPHASE A ELECTRODES AJUSTABLES

Publication

EP 1258177 A1 20021120 (EN)

Application

EP 00902432 A 20000118

Priority

US 0001123 W 20000118

Abstract (en)

[origin: WO0154464A1] Three adjustable electrodes (33a-33c) within a chamber (40) form a thermal plasma generating system (30). The electrodes (33a-33c) are positioned with a narrow gap at one portion and a wide gap at another portion to form a cone shape. The gap between the electrodes is adjusted to accommodate for wear on the electrodes (33a-33c). An electric arc is initiated at the narrowest point between two electrodes which moves over the length of the electrodes because of a magnetic field created by the arc and the forward motion of the injected stream. At the end of the electrodes, the arc is extinguished and another arc is initiated. The continuous are moving along the electrodes ionizes a working stream that is tangentially injected from three pneumatic rings (35a-35c) which provide improved mixing of the working stream for high quality thermal plasma. The thermal plasma exits through a narrow orifice (42).

IPC 1-7 (main, further and additional classification)

H05H 1/36

IPC 8 full level (invention and additional information)

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CPC (invention and additional information)

H05H 1/44 (2013.01); **H05H 1/36** (2013.01); **H05H 1/48** (2013.01)

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