

Title (en)  
PLASMA BURNER WITH MICROWAVE STIMULATION

Title (de)  
PLASMABRENNER MIT MIKROWELLENANREGUNG

Title (fr)  
CHALUMEAU A PLASMA A EXCITATION PAR MICRO-ONDES

Publication  
**EP 1421832 B1 20061004 (DE)**

Application  
**EP 02762243 A 20020820**

Priority  
• DE 0203102 W 20020820  
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Abstract (en)  
[origin: WO03026365A1] The invention relates to a plasma burner with microwave stimulation, by means of which a stable plasma (5) can be generated even with significant pressure variations for the process gas. Said plasma burner comprises, in addition to a diameter enlargement (4) of the cavity (3) in the region of the plasma (5) as already disclosed in DE 19 511 915 A1, electrically-conducting windings (12), coaxially encompassing the plasma (5) within the cavity formed by the diameter enlargement. Said windings (12) permit the electrical waveguide system, formed by the diametrically-enlarged cavity (4) and windings (12) as coaxial outer guide and the plasma as coaxial inner guide, to be suitable for the transmission of microwaves in said region of the plasma burner with regard to the parameters of impedance and transmission bandwidth in a particular manner, even with significant pressure variations in the process gas and corresponding variable conductance conditions. Said plasma burner is characterised in operation by a stable plasma (5) and very good ignition and re-ignition properties.

IPC 8 full level  
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CPC (source: EP US)  
**H05H 1/30** (2013.01 - EP US); **H05H 1/50** (2013.01 - EP US)

Cited by  
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