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(54) **TRANSFORMER IGNITION CIRCUIT FOR A TRANSFORMER COUPLED PLASMA SOURCE**

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(58) **Field of Search** **315/111.51, 111.21, 315/111.41, 111.71; 156/345.35, 345.48, 345.49; 118/723 ME, 723 I, 723 IR**

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(57) **ABSTRACT**

According to one embodiment, an apparatus is described. An apparatus includes a vacuum chamber, an electrical transformer coupled to the vacuum chamber, and an ignition circuit. The electrical transformer induces an electromagnetic field within the vacuum chamber. The transformer includes a primary winding and a magnetic core. In addition, the transformer includes a secondary winding, to which the circuit used to ignite the vacuum chamber is coupled. The ignition circuit is used to establish a controlled capacitive discharge that is used to ignite the vacuum chamber.

21 Claims, 8 Drawing Sheets

