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(54) Title: MICROWAVE PLASMA APPLICATOR WITH IMPROVED POWER UNIFORMITY

(57) Abstract: An apparatus for generating plasma includes a plasma discharge tube and a conductive coil helically wound around an outer surface of the plasma discharge tube. A waveguide is coupled to a microwave cavity surrounding the plasma discharge tube to guide the microwave energy into the plasma discharge tube such that the plasma is generated in the plasma discharge tube. The waveguide is positioned such that an electric field of the microwave energy is oriented at a predetermined angle with respect to the longitudinal axis of the plasma discharge tube. A resulting induced electric current in the conductive coil affects power absorption in the plasma discharge tube, the predetermined angle being selectable such that power absorption in the plasma discharge tube is according to a predetermined profile with respect to the longitudinal axis of the plasma discharge tube.

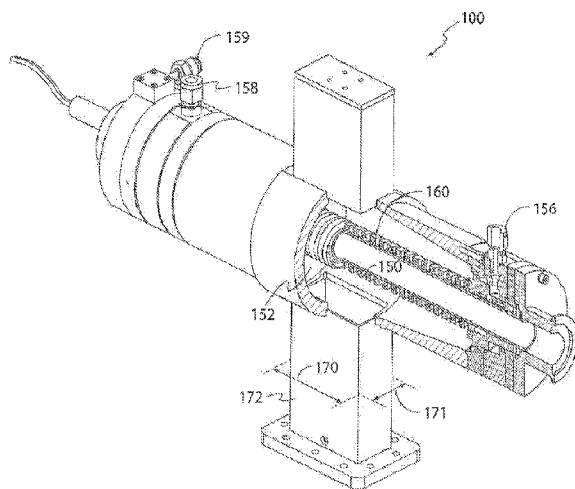


FIG. 5A



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