Apparatus for Treating Gaseous Pollutant with Plasma

Abstract

An apparatus for treating a gaseous pollutant with plasma, comprises a microwave source generating a microwave oscillation; a waveguide component coupled to the microwave source; and a resonant cavity coupled to the waveguide component, the microwave oscillation is substantially propagated toward a waveguide direction, the resonant cavity comprises a first chamber and a second chamber, the waveguide direction is substantially parallel to a reference axis defined in the first chamber, the first chamber has an inner wall surrounding the reference axis, the inner wall comprises a first inner wall obliquely inclined toward the reference axis and a second inner wall substantially parallel in respect to the reference axis relatively, an area of the first inner wall is larger than that of the second inner wall so that the first chamber has a tapered space, and the microwave oscillation interacts with an ignition gas in the second chamber to generate a torch.

(Fig. 1)