

Device for Treating Gaseous Pollutant with Plasma

Abstract

A device for treating a gaseous pollutant with plasma, comprising a microwave source, a waveguide assembly, and a resonant cavity. The microwave source generates a microwave oscillation, the waveguide assembly is coupled to the microwave source, the resonant cavity is coupled to the waveguide assembly, the microwave oscillation is substantially transmitted towards a waveguide direction, the resonant cavity comprises a first chamber and a second chamber, the waveguide direction is substantially parallel to a reference axis of the first chamber, the first chamber is provided with an inner wall surrounding the reference axis, the inner wall comprises a first inner wall inclined towards the reference axis and a second inner wall substantially parallel to the reference axis, the area of the first inner wall is larger than that of the second inner wall so that the first chamber is formed to be a gradually-reduced tapered space, and the microwave oscillation reacts in the second chamber with an ignition gas to form a torch.

(Fig. 1)