

APPARATUS FOR TREATING GASEOUS POLLUTANT WITHOUT REQUIRING FUEL

Abstract

An apparatus for treating gaseous pollutant without requiring
5 fuel includes a microwave source, a waveguide component, and a
resonant cavity. The microwave source is configured to generate a
microwave oscillation. The waveguide component is coupled to the
microwave source and configured to receive the microwave
oscillation such that the microwave oscillation is propagated through
10 the waveguide component. The resonant cavity is coupled to the
waveguide component and extending along a waveguide direction,
the resonant cavity includes a tapered chamber in proximity to the
waveguide component and a combustion chamber distant from the
waveguide component, the combustion chamber is configured to
15 receive the microwave oscillation passed through the tapered
chamber, and the microwave oscillation interacts with a non-fuel
ignition gas in the combustion chamber to generate a torch.

Fig. 1

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