

# Optimizing energy efficiency for industrial application of pulsed corona gas cleaning techniques

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## CHARACTERISTICS OF A NOVEL MULTIPLE PULSED PLASMA TORCH

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This paper presents some issues on a novel atmospheric pressure pulsed plasma torch, as introduced by Keping Yan. A high-voltage pulse generator is used to induce transient plasma in a gas flow (air) under different conditions of pulse repetition rates, energizing levels and mass flow rates. A dedicated multi-torch reactor, with rod-to-rod electrode type, was built to perform studies on electrical behavior and thermal effects of the generated pulsed plasma. In addition, the chemical activity of the multiple torch plasma was evaluated by measuring the ozone production. The pulsed plasma torch is achieved in plug-flow like reactor under turbulent conditions of the gas flow.