A SYSTEM AND METHOD FOR TREATING WATER SYSTEMS WITH HIGH VOLTAGE DISCHARGE AND OZONE

ABSTRACT

A system and method for treating flowing water systems with a plasma discharge to remove or control growth of microbiological species. Components of the water system are protected from being damaged by excess energy from the electrohydraulic treatment. Ozone gas generated by a high voltage generator that powers the plasma discharge is recycled to further treat the water. A gas infusion system may be used to create fine bubbles of ozone, air, or other gases in the water being treated to aid in plasma generation, particularly when the conductivity of the water is high. An electrode mounting assembly maintains a high voltage electrode and ground electrode at a fixed distance from each other to optimize plasma generation. An open support structure for the high voltage generator circuit physically separates spark gap electrodes and resists metal deposits that may disrupt discharge of a high voltage pulse to create the plasma.

FIG. 6