

APPARATUS AND METHOD FOR DISSOLUTION OF OZONE IN WATER AND CATALYTIC OXIDATION

ABSTRACT OF THE DISCLOSURE

5 A system and method for oxidation treatment of water in which ozone gas is dissolved in water by passing a mixed gas-liquid stream through a monolith at an elevated pressure that is close to the preferred gas output pressure for an ozone generator. The monolith is preferably contained at least partially within a gas-liquid separator vessel. Advanced oxidation is optionally provided by injecting hydrogen peroxide and/or embedding a catalyst on the monolith. At least a portion of the treated water is preferably recycled in order to increase total ozone dosing in the effluent stream.

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Figure 1