

Membrane Technology: Pilot Studies of Membrane-Aerated Bioreactors

This research investigates the use of submerged gaspermeable membranes for the delivery of oxygen to municipal wastewater. This approach is likely offer significant advantages over the conventional approach of using bubbles. The air is delivered to the membranes by an inlet manifold; it then flows through the fibers and escapes through an outlet manifold at the other side of the aeration tank. In this configuration the depth of the water is unimportant since the air does not need to be compressed to overcome the hydrostatic pressure. Pressure drops across the membrane are low and the ability to control the contact time between the air and water enables high oxygen transfer efficiencies to be obtained. As a result, the energy costs for aeration should be significantly less than for conventional aeration



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