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INFLUENCE OF FINE BUBBLE GENERATORS NOZZLES DIAMETER ON THE DISSOLVED O₂ CONCENTRATION

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Abstract

This paper presents an experimental study regarding the influence of fine bubble generators (FBG) nozzles on the oxygen transfer rate from air to water, in case of pneumatic aeration processes of stationary (still) waters. This experimental study was conducted after three types of fine bubbles generators were previously computed, designed and constructed to satisfy the conditions imposed in order to provide valid experimental results. The three constructive versions were tested under similar operating conditions so that, the only parameter that influences the transfer of oxygen would be the nozzle diameter. It was found that, with increasing the air outlet diameter, the oxygen transfer rate into the water decreases.

Key words: fine bubble generators, nozzle diameter, stationary waters oxygenation

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