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PERFORMANCE OF SINGLE-STAGE ROTATING BIOLOGICAL CONTACTOR WITH SUPPLEMENTAL AERATION

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Abstract

The aim of this paper was to study the performance of a single-stage rotating biological contactor with supplemental aeration in terms of removal efficiency of organic and nitrogen content. Research was based on fifteen samples collected during the four year period. The wastewater was low strength with maximal measured concentration of 362 mg COD/l, 100 mg NH₄/l, and 324 mg TSS/L. The maximal measured removal efficiency of COD (chemical oxygen demand) and TSS (total suspend solids) were 71% and 56%, respectively. The high rate of nitrogen removal was achieved using supplemental aeration. The removal efficiency of NH₄, NO₂ and NO₃ were 83%, 60% and 52%, respectively.

Key words: nitrogen removal, organic removal, single-stage rotating biological contactor, supplemental aeration, wastewater

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