

## **A PERSPECTIVE FOR POOR WASTEWATER INFRASTRUCTURE REGIONS: A SMALL-SCALE SEQUENCING BATCH REACTOR TREATMENT SYSTEM**

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**Abstract.** Development of infrastructure in sewerage systems is essential for improving the living conditions and human health. Considering this situation, research was oriented to the use of a small Sequencing Batch Reactor (SBR) treatment system as a small-scale plant in certain sewers. This type of treatment system was chosen because it can be adapted to the quantitative changes of flows. The most important advantages of SBR process include the possibility of modifying the operating cycle, the elimination of secondary clarifiers and the satisfying control of operations that constitute the treatment. Comparing the problems in Romania and Senegal, regarding wastewater treatment, the present paper aims to identify the best methods and techniques to treat the municipal wastewater in small treatment plants with sequential operation. This paper examines the possibility of using SBR process to treat the municipal wastewater characterized by low flow. This paper also presents a comparative analysis of the degree of purification achieved in a SBR wastewater treatment plant, as well as legislative regulations in Romania and Senegal. Finally, the paper identifies the possible uses of the treated wastewater in different household activities.

**Keywords:** municipal wastewater, Sequencing Batch Reactor (SBR), legislative regulations.

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