



Pollution parameters and identification of performance indicators for wastewater treatment plant of Medea (Algeria)

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ABSTRACT

The sanitation system in Algeria requires a mastery of the functioning of the collection network and treatment using performance indicators that identify gaps and to develop solutions for better wastewater management. This work aims to identify the performance indicators that are chosen on the basis of the problems often encountered. The referred performances concern the problems related to clear parasites waters and some that highlight the phenomena of sedimentation–erosion in the network of Medea city. For the WWTP, we are interested in the plant hydraulic and treatment capacity, the bacterial metabolism, the treatment yield, the correlations between pollution parameters and the energy consumption. The results showed that the dilution rate of wastewater, which is caused by the clear parasites waters, requires significant care at the sewerage network. The imbalance into nutrients relating to bacterial metabolism can be an obstacle at the level of biological treatment. For high ratios TSS/COD and TSS/BOD₅ that translate a pollution at particulate character, a quantitative study would be required in particular to evaluate the influence of collection networks on the quality of domestic sewage. The high values of the electrical energy necessary for the elimination of recorded pollution require to perform a diagnostic analysis on the installation.

Keywords: Sanitation network; Treatment plant; Performance indicators; Ratios; Optimization; Medea

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