

## COMMON EFFLUENT TREATMENT PLANT

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### ABSTRACT

The increasing demand for water in combination with frequent drought periods, even in areas traditionally rich in water resources, puts at risk the sustainability of current living standards. In industrialized countries, widespread shortage of water is caused due to contamination of ground and surface water by industrial effluents, and agricultural chemicals. Global trends such as urbanization and migration have increased the demand for water, food and energy. Development of human societies is heavily dependent upon availability of water with suitable quality and in adequate quantities, for a variety of uses ranging from domestic to industrial supplies and Rapid industrialization is adversely impacting the environment globally. Pollution by inappropriate management of industrial wastewater is one of the major environmental problems in India as well, especially with small scale industrial sector in the country. To address the pollution coming out from industries, adoption of cleaner production technologies and waste minimization initiatives are being encouraged. The present case studies on Common Effluent Treatment Plants (CETP) for Textile industry are considered as one of the viable solution for small to medium enterprises for effective wastewater treatment. An effluent treatment plant is operating on physical, chemical and biological treatment method with average waste water in flow of 3MLD has been considered for case study. The wastewater is analyzed for the major water quality parameters, such as Biological Oxygen Demand (BOD),pH, Chemical Oxygen Demand (COD), Total suspended solid (TSS) and Total Dissolved Solids (TDS). The effluent samples were collected on a daily basis for a period of one month. The raw waste water pH was highly alkaline it was then bringing down to neutral which was helpful for chemical and biological treatment. The BOD, COD of the treated effluent reduced significantly, where as very small reduction was observed in dissolved solids. Most of all the parameters were within the permissible limits of Maharashtra Pollution Control Board, India

**KEYWORDS-** Environment, Common Effluent Treatment Plant (CETP), pH, BOD, COD, TSS, TDS, chemical and biological treatment, wastewater treatment, Textile industry.