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CASE STUDY ON ENERGY EFFICIENCY OF BIOGAS PRODUCTION IN INDUSTRIAL ANAEROBIC DIGESTERS AT MUNICIPAL WASTEWATER TREATMENT PLANTS

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Abstract

Anaerobic digestion was analyzed as the biological process that converts the organic matter present in various types of wastes, activated sludge from the wastewater treatment facilities respectively, into biogas. Latest advancements in the mathematical modeling, simulation and control practices have helped in gaining a better insight of the process. In this paper, an energy efficiency and techno-economical investigation of anaerobic digestion technology for the CHP cogeneration unit, has been done to detect maximum concentrations of methane and to minimize the costs at a Municipal Wastewater Treatment Plant.

Key words: anaerobic digestion, biogas, CHP, energy efficiency, wastewater treatment plant

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