

Anaerobic Digestion of Municipal Solid Waste in Asia

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Abstract

The potential of anaerobic digestion treatment processes for waste stabilization with the generation of valuable by-products (biogas and stabilized waste residue) has been increasingly recognized in Asia.

The municipal solid waste (MSW) composition in Asia mainly consists of organic fractions, with high moisture content, generally consistent with the requirement for anaerobic digestion.

The benefit of this technology highlights the need for opportunity for does not wake sense to me MSW treatment. The project "Waste to energy and fertilizer in Rayong, Thailand" demonstrated the applicability of this process using various substrates. Moreover, the process optimization of anaerobic digestion is a current main research focus at the Asian Institute of Technology (AIT) that has generated valuable results and findings. The shortening of digestion time along with enhanced process efficiency is one of the important aspects of this study. This paper also presents the results of a pilot scale experimental investigation using sequential batch anaerobic digestion concepts under thermophilic conditions. The overall results show that the start-up period decreased with subsequent cycles of increasing leachate recirculation rate. This study concludes that anaerobic digestion in subsequent sequencing operations under thermophilic conditions is a viable options for organic solid waste treatment.

Keywords: anaerobic digestion, biomethanization, municipal solid wastes, sequential batch process