

Optimization of a dehydration processes using SFDF system

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Despite the interest in dual-polymer flocculation, a study of the mechanism of single flocculant/dual flocculation (SFDF) systems during solid-liquid separation by dewatering equipment has yet to be performed. This study estimates the effect of dual flocculation using a poly acylamide-co-trimethyl ammonium ethyl acrylate chloride as a single flocculant on the dewatering properties of sewage sludge.

It has been shown that SFDF systems can be a highly effective alternative to current single-polymer systems and dual-polymer system, resulting in low final cake moisture and fast dehydration.

As the results, the optimal conditions for SFDF system are 70% for high molecular weights polymer and 50% for low molecular weight polymer as the 1st dosage ratio against the total dosage.