

Optimization of Slurry Flocculation and Dewatering Based on the Characteristics of Flocc

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Sludge dewatering is one of the most difficult problems to wastewater treatments.

The dewaterability is highly restricted by the floc structure and the relationship between suspended solids and flocculants.

There are many reports which is shown that efficient sludge conditioning can improve sludge dewatering characteristics and promote the separation of flocs from the liquid phase to achieve a low water content in filtrated cakes.

Although numerous researches investigated sludge conditioning, few are devoted to the mechanism.

In this paper, we estimate the effects of the chemical conditioning process with coagulant and the concentration both SS and flocculant on sludge dewaterability. And, possible explanation for the experimental results based on the floc structure and reactivity information is discussed.