

عنوان مقاله:

Flocculation process and Increasing sedimentation of total suspended solids in clarifier

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خلاصه مقاله:

Sedimentation is the process of allowing particles in suspension in water to settle out of the suspension under the effect of gravity. The particles that settle out from the suspension become sediment, and in water treatment is known as sludge. Several factors can affect the sedimentation process including physical and environmental conditions. Increased pretreatment may be necessary when adverse conditions are present. Factors that affect the sedimentation process include the shape and size of particles, the density of particles, water temperature, Alkalinity of water, particle charge, dissolved substances in the water, environmental effects, and characteristics of the basin. Flocculation is the slow mixing process that causes smaller particles to merge into larger particles that settle more easily. Polymer flocculants are used to promote solid-liquid separation processes in potable water and wastewater treatment by controlling the rate of impacts between particles as they gain size. In this paper, the effect of increasing substance A_{23} to B_{90} polymer flocculant on the deposition of suspended solids is investigated. The results showed that by adding A_{23} , the amount of particle sedimentation increases and water turbidity decreases, in addition by adding substance A_{23} to the polymeric flocculant, less amount of B_{90} flocculant polymer is required to increase the sedimentation efficiency.

کلمات کلیدی:

Sedimentation, Total Suspended Solids (TSS), clarifier, Wastewater Treatment, saving water in industry

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