Flotation Encyclopedia Article

Flotation

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Flotation

An operation in which submerged materials are floated, by means of air bubbles, to the surface of a water and removed. Bubbles are generated through a system called dissolved air flotation (DAF), which is capable of producing clouds of very fine, very small bubbles. A large number of small-sized bubbles is generally most efficient for removing material from water.

This process is commonly used in **wastewater** treatment and by industries, but not in **water treatment**. For example, the mining industry uses flotation to concentrate fine ore particles, and flotation has been used to concentrate **uranium** from sea water. It is commonly used to thicken the sludges and to remove grease and oil at wastewater treatment plants. The textile industry often uses flotation to treat process waters resulting from dyeing operations. Flotation might also be used to remove surfactants. Materials that are denser than water or that dissolve well in water are poor candidates for flotation. Flotation should not be confused with foam separation, a process in which surfactants are added to create a foam that affects the removal or concentration of some other material.