

Reuse of Sludge in Brick Making

The work done in this study was devoted to the development of a procedure to produce bricks from water treatment plant sludge incorporated with silica fume (SF) and/or rice husk ash (RHA) as a modern way for sludge reuse. The main objectives are to increase the value of the water treatment plant sludge and to provide a sustainable and profitable disposal alternative for it. A large quantity of sludge is generated each year from water treatment plants in Egypt. Disposing of the water treatment plant sludge to the nearest watercourse accumulatively increases the aluminum concentrations in water and consequently in human bodies, which has been linked to occurrence of Alzheimer's disease. Landfill disposal of the sludge is impractical because of the high cost of transportation and it depletes the capacity of the landfill. Among all options, the use of sludge, incorporated with other wastes, in manufacturing of constructional elements is considered to be the most economic and environmentally sound option. This trend also provides an environmentally sound manner to reuse some of the agricultural and industrial wastes, such as RHA and SF.

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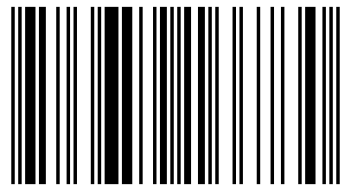
Reuse of Sludge, Silica Fume, and Rice Husk Ash in Brick Making

A Lab-Scale Study



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