

REUSE OF TEXTILE MILL SLUDGE IN CEMENT BASED SOLID BLOCKS

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Abstract

Study deals with reuse of textile mill sludge in making cement bases solid blocks which can be used in practice for bulk usage of sludge. Textile sludge and fly ash are analysed by using XRF technique. Textile sludge is mixed with cement and later with combination of cement and fly ash to make solid blocks. Solid blocks are tested for compressive strength. To study the post effects of the sludge reuse, water used for curing (curing water) is also analysed for different parameters such as pH, EC, Solids, Hardness, chlorides etc by standard methods. Addition of fly ash reduces the leaching from the solid blocks. Compressive strength of cement and sludge blocks is 23.8 N/mm^2 , whereas solid blocks made of sludge, cement and fly ash shown compressive strength of 29 N/mm^2 . Reuse of textile mill sludge as building material will increase bulk usage of sludge in future, thus completely eliminating landfilling disposal option.

Keywords : Textile mill Sludge, Fly ash, curing water, compressive strength, XRF