

Recycling and Waste Management

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Urban wastes recycling into fired clay bricks: A review

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Brick is one of the most common masonry units used as building material. Due to the demand, different types of waste have been investigated to be incorporated into fired clay brick for example sludge wastes, agricultural wastes, fly ash, fuel wastes and other wastes. Previous investigations have demonstrated positive effects on the physical and mechanical properties such as lightweight bricks with improved shrinkage, porosity and strength. However, reduced performances in number of cases were also demonstrated. In addition, the high temperature in the firing process allows volatilization

of dangerous components through emissions, changes the chemical characteristics of the material and eliminates the toxic components through fixation process. Therefore, this alternative disposal method for the urban waste may provide sustainable method to immobilise toxic chemicals that pose a very high risk to the environment through either leaching or emissions as well as providing a new construction product with improved properties providing the mix is appropriately designed and prepared for the required properties.

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