

A New Approach to the Production of Bricks Made of 100% Fly Ash

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ABSTRACT

A new approach to the production of bricks was carried out by using 100% lignite fly ash. The possibility of fly ash for use as building material was investigated. Pure fly ash and certain amount of mixing water (17.5 mass-%) were used as body composition for the production of brick samples. This work studied the influence of treatments of fly ash, so called, sieved 63+40 μ m fly ash, sieved 40 μ m fly ash, ground 5 h fly ash and ground 10 h fly ash on mechanical properties. Test pieces made of 40 μ m fly ash showed the superlative strength and were found to be superior in mechanical strength, especially in compressive strength as compared to red-fired clay brick, to common clay bricks and to facing bricks daily used in constructional work. The samples made of other types of fly ashes, in addition, can be superior to red-fired clay bricks and common clay bricks. Other brick properties can reach the specifications as required by market demands.