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Project Report on
**PELLETIZATION TECHNIQUE FOR
PRODUCTION OF FLY ASH AGGREGATES**

Submitted in partial fulfilment for the award of degree of Bachelor of
Engineering in

CIVIL ENGINEERING
By

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ABSTRACT

The environmental impacts of crushed stone aggregate, extraction are a source of increasing in many parts of the country. The impacts include loss of forests, noise, dust, blasting vibrations and pollution hazards unplanned exploitation of rocks may lead to landslides of weak and steep hill slopes. The concern about the depletion of natural sources and their effect on environment has particularly focused attention on possibility of use synthetically produced (from waste materials) aggregates as an alternative to naturally occurring materials. In order to achieve alternative as over a natural resource, the waste products has to be used effectively.

Now a day due to industrialization there is a scarcity of electricity .In India having 85 thermal power plants for generation of electricity, in each thermal plant due to generation of electricity 85 million tones of fly ash coming as residual per annum.The usage of fly ash in a construction industry is a challenging job and will make tremendous change all over world. There are different ways of using fly ash in industry like it can be used as partial replacement of cement. But major challenge will be complete use fly ash as a aggregate in an construction industry. So, fly ash can be used in making artificial light weight coarse aggregates. The aggregates so prepared are known as Fly ash aggregates, the method of formation is known as PELLETISATION.

In this context,the present study focuses on studying the characterization of fly ash aggregate and compressive strength of concrete. Ordinary Portland cement of 43 grade was selected and fly ash aggregates were prepared by mixing fly ash with cement and water. The fly ash and cement proportions of 95:05, 90:10 and 85:15 were tried with a approximate suitable water cement ratio to get the fly ash aggregates and allowed for curing. The properties of fly ash coarse aggregates were studied. A mix design was done for M25 grade of concrete by IS method, by complete and partial replacement of fly ash aggregate. The concrete cubes were casted with the fly ash aggregates obtained from different fly ash-cement proportions. The addition of aggregate to the concrete is examined by monitoring the compressive strength as a function of curing period. Based on experimental results evaluated for its application in various civil engineering fields.