

To Study Technical and Feasibility Parameters for Manufacturing FAL-G Bricks with local Material in Assam

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Abstract:

Fly ash is one of the residues generated in combustion of coal in thermal power plants having pozzolanic properties which can be useful for cement and concrete industries as well as construction industries in form of manufacturing bricks blocks road embankment mine filling etc. Production of fly ash in our country is of order 120-135 Million Tonne out of which hardly 36-40 % is used in all possible applications.

Bricks are one of the key material used on very large scale which consume coal and other useful agricultural waste for firing and degrade huge amount of fertile land and also emits measurable quantity of CO₂ gas in atmosphere. Use of fly ash in manufacturing FAL-G bricks is a proven technology since last decade with potential benefits over conventional clay bricks. The economic and environmental merits and continuous promotion by ministry of Environment and Forest as well as TIFAC New Delhi has significantly increased the production and use of FAL-G bricks. Economy of this bricks depends upon the raw material resource mainly fly ash and raw lime with pre-designed parameters for proportion of ingredients.

The scope of present work as part of IDP and innovation council of Gujarat Technological University is to explore the opportunity of manufacturing fly ash bricks with the local material in Assam provided by LALLAMOOKH TEA.CO.PVT.LTD (Assam). Study will include testing of ingredients, fixing the proportion, testing the brick for compression and water absorption and to prepare project report including economic viability of the project. Efforts will be made to use waste pulp from paper industry to reduce weight of the brick and to add mouldability for making precast drainage /gutter blocks for tea garden.

Key Words: Fly Ash, FAL-G brick, Crushing Strength