**VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM**

# STABILISATION OF COAL ASHES FOR USE IN VARIOUS GEOTECHNICAL ENGINEERING APPLICATIONS

A project report submitted in partial fulfillment for the award of the degree of
**BACHELOR OF ENGINEERING IN CIVIL ENGINEERING**

**by**


| | |
|---|---|
| **Adarsh K** | (4JC06CV003) |
| **Arjun H R** | (4JC06CV009) |
| **Bharath S Kanth** | (4JC06CV011) |
| **Pruthvi M** | (4JC06CV037) |

Under the Guidance of

**Dr. K. Prakash**

Professor

Department of Civil Engineering,

S.J.C.E., Mysore.



Sponsored by

**Karnataka State Council for Science and Technology**

**Bangalore.**



**DEPARTMENT OF CIVIL ENGINEERING**

**SRI JAYACHAMARAJENDRA COLLEGE OF ENGINEERING**

**MYSORE 570 006**


**2010**

# Abstract

Coal ashes are obtained from coal fired thermal power plants. They pose serious storage and disposal problems. Hence, these problems should be overcome and utilisation of these materials in bulk is the need of the day. Stabilisation of these ashes is essential to improve their performance related properties.

This project work deals with the stabilization of pond ashes obtained from two thermal power plants by the use of a clayey soil as a mechanical admixture. The present experimental work deals with

- The study of various properties of coal ashes like specific gravity, grain size distribution and free swell behaviour.
- The study of compaction behaviour of various coal ashes and (pond ash + BC soil) mixtures.
- The study of CBR behaviour of various (pond ash + BC soil) mixtures.

Through exhaustive, well planned and carefully conducted testing programme, it has been shown that the compacted density and CBR of pond ashes can be improved by the addition of an optimum content of clayey soil.