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DEPARTMENT OF CIVIL ENGINEERING

A Project Report On

"GEOPOLYMER CONCRETE"

(KSCST Sanctioned Project)

PROJECT GUIDE
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ABSTRACT

In this project fly ash was brought from Thermal Power Plant Raichur and determined the physical properties of fly ash. According to the design, the mixing of concrete was carried out and the mix was casted in the moulds of 100x100x100mm size. The curing of concrete cubes was done on an average temperature of 50°C. The curing process was carried out for 1, 3 and 7days.

This report presents a comprehensive summary of the extensive studies conducted on fly ash-based Geopolymer concrete. Test data were used to identify the effects and salient factors that influence the properties of the Geopolymer concrete in the fresh and hardened states. These results were utilized to propose a simple method for the design of Geopolymer concrete mixtures.

The testing of hardened cubes was carried out in compressive testing machine. The testing of cement concrete was carried out as same as Geopolymer concrete, to tally the strength. Graphs are plotted to check the variation of strength of 1, 3 and 7days.The maximum compressive strength of Geopolymer concrete is 23N/mm^2. The last part of the article describes the results of the tests conducted on Geopolymer concrete illustrates the application of the Geopolymer concrete in the construction industry. The economic merits of the Geopolymer concrete are also mentioned.