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Utilization of Mining Waste in Geotechnical Engineering

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Abstract: This paper investigates the effect of fly on geotechnical properties of soil. Fly ash collected from the hopper attached to an electrostatic precipitator when coal was changed at a coal fired power plant. Concerning the major challenges regarding the safe reuse, management and disposal of these wastes an attempt has been made to mix fly ash at 5, 10, 15, 20, 25, and 30% on the basis of dry weight with local clay soil. To understand the behaviour of fly ash with soil, numbers of laboratory experiments were performed on the local soil (clay) and contaminated soil with varying percentage of fly ash.

Keywords: Ggeotechnical properties, Concrete, Fly ash

REFERENCES

- [1]. Controller and Auditor General (CAG -2012), All India audit report on "management of waste India".(saiindia.gov.in/...Reports/...Reports/...Report_Environment.../Chapter_5)
- [2]. A. Dixit, R. K. Srivastava, An Estimate of Contaminated Land Area due to Industrial Hazardous Waste Generation in India, International Journal of Advanced Research inEducation&Technology2016, vol.2 issue 3, pp.117-125.
- [3]. Ash Utilization Division National Thermal Power Corporation (NTPC-2007), Resource for High Strength and Durability of Structures at Lower Cost.
- [4]. Standard Compaction Effort equivalent to IS light compaction (IS: 2720PartVII, 1980
- [5]. R Kumar, S Kumar, S P Mehrotra Towards sustainable solutions for fly ash through mechanical activation Resources, Conservation and Recycling, 2007, 52(2007)157–179.
- [6]. K Prakash, A Sridharan, Beneficial properties of coal ashes and effective solid waste management- Practice Periodical of Hazardous, Toxic, 2009 Volume 13, Issue 4,239-248.

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