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TITLE OF PROJECT:**INTERPRETATION OF SHEAR STRENGTH OF FIBER REINFORCED POND ASH**

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ABSTRACT (150-300 words):
The constant increase in thermal power generation in India has the cascading effect of increased production of coal ash which if not utilized is an environmentally hazardous material. The un-utilized fly ash and bottom ash is deposited in the ponds in slurry form. Huge amounts are spent on operation and maintenance of ash ponds. Moreover, the ash ponds are occupying more than 50,000 hectares of cultivable land. Hence, it is necessary to increase the utilization levels of pond ash. However, it is possible only when the engineering behaviour of pond ash is well understood. Many times, the pond ash in applications of pavements, retaining walls, bridge abutments etc. Needs to be reinforced. The reinforcement can be fabric or in fiber form. Investigations are carried out on pond ash reinforced with fabric. However, there is scope for understanding the behaviour of fiber reinforced pond ash. In view of the above, in the present study, efforts are made to reinforce the pond ash with staple fiber derived from a polymeric woven geotextile in various substitution percentages of 0.5, 1, 3 and 5%. At each substitution percentage, the aspect ratio is varied at 5, 10, 20 and 50. The strength behaviour is studied by conducting the direct shear tests on composite sample dry density of 70%, 80%, and 90% of MDD.

KEYWORDS: THERMAL POWER GENERATION , COAL ASH UTILIZATION , ASH PONDS , POND ASH REINFORCEMENT , POLYMERIC WOVEN GEOTEXTILE , FIBER-REINFORCED COMPOSITES

CATEGORY: CONCRETE TECHNOLOGY AND BUILDING MATERIALS