A Review on the Mathematical Models to Evaluate the Properties of Fiber Reinforced Soil

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ABSTRACT

Soil reinforcement is most popular technique among other ground improvement technique. Availability of different form of materials as option for reinforcement is also making this technique popular among the engineers. Fiber reinforcement is one of the new emerging soil reinforcement techniques. It is similar to the reinforcement provided by the plant of roots. Randomly distributed fibers provide interlocking and friction resistance to resist the movement of soil particles, which significantly increase the load carrying capacity. Now-a-days fiber reinforcement is used in the embankment, slope stabilization, pavement application. Different studies were conducted to understand the behaviour of fiber reinforced soil. Also some mathematical models are developed. Mathematical model is useful to understand the behaviour of material and it is helpful for designing purpose. In this paper brief review of the mathematical models developed by different researchers is presented.

Keywords: shear strength, soil reinforcement, load carrying capacity