

The Study of Geosynthetics as Concrete Reinforcement

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ABSTRACT

In many regions, the usage of steel reinforcement in concrete has some drawbacks, such as corrosion, etc. Many innovative materials are being employed as alternative to steel reinforcement to alleviate the steel corrosion. Geogrid is a form of geosynthetic material mainly used in earth embankments, retaining walls and in some structural elements like slabs, beams, and columns. The geogrid material is used as an alternative to steel reinforcement, since it is good in both flexural and tension behavior. Engineers and designers have a lot of alternative for new applications because of the availability of many types of polymers and geometry of the geogrid materials. This leads to the difficulty in selecting the particular type of geogrid according to the need. This paper provides the complete analysis on different types of geogrids and their physical and mechanical properties which affects the strength and durability of the elements in which it is confined.

Keywords: *Polymer, Geosynthetics, Geogrid, Civil Engineering, Materials, Smart Materials.*