

## **Behavior of geogrids under different strain level**

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### **Abstract**

To get a well prediction of working stress analysis, the decision of material properties is important. A series of monotonic tensile loading tests are carried out to demonstrate PET geogrids' behavior under three strain levels (1%, 3%, and 4.5%). The small range of load-strain curve (i.e. local strain less than 0.3%) at each strain level is established by a new developed measurement system. This system is mainly composed of a stepper motor, a load cell, two linear variable differential transducers, two non-contact proximity sensors, and a 22 bits analog/digital converter. The test results show that the new system can get a clear trend of local load-strain curve at each strain level to provide a well estimation of stiffness.

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