

The Comparison and Analysis of International Tensile Test Methods and Results

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ABSTRACT

One of the most fundamental tests on the geosynthetics materials is tensile property. By means of tensile test, the ultimate tensile strength, elongation, initial tensile modulus, et cetera could be acquired, which are not only the good index for design works but also the fine reference for conformity checks.

Test specimen preparation, conditioning atmosphere, procedures, as well as apparatus such as types of clamps and jaw faces are specified and declared thoroughly in individual literatures. All these elements have certain influences upon the test result. By far it is inappropriate to cite values from random or unassociated tests. However, when tests are carried out by the one method, it still might explore variances in results due to dissimilar setups without violating the norms. Focusing upon the differentiation among the international tensile test methods, this article illustrates the variation of principles and analyzes reciprocal effects resulted from multiplicity test settings.