

# **RESEARCH OF STANDARD PENETRATION TEST WITH TORQUE MEASUREMENT AND SUGGESTION OF PROCEDUREMENT**

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The growth of the cities and consequent decrease of available lands have been induced the use of less favorable places to the building site. So, it has been contributing to the development of more appropriate techniques for the geotechnical characterization of those places. The SPT-T test, Standard Penetration Test with Torque Measurement, is a good way to solve this problem, because, besides providing a static parameter of resistance, it is a cheap test and it is easy to be executed in any land type. The SPT-T has been used in Brazilian foundation practice since 1991, but the torque measurement has not been standardized yet. The test has been done as follows: after penetration of the sampler with the count of blows, an adapter is placed which allows the joining of the torquemeter. Afterwards, rotation on the group rod-sampler is applied by using the torquemeter. The maximum torque is measured and the rotation continues without interruption until the torque stands constant, when the residual torque is obtained. An electric torquemeter was built and with a data acquisition system made the getting of the torque versus rotation degree curve possible. This research led to gauge the direct read torque wrench to the study of the maximum and residual torque, to the verification of some affecting factors and rotation speed. Many tests were done and showed that, if the test becomes standardized and spread in the market, it can be a good tool for geotechnical projects.