

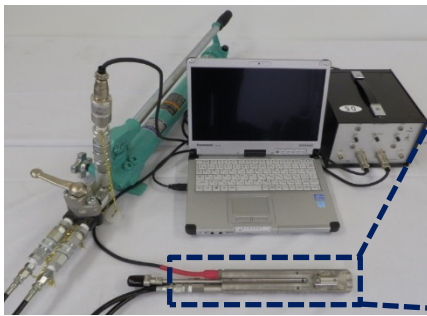
GoTEN-tk

孔内局部載荷試験機 (Point Load Tester in borehole)

特許 第4584734号

■GoTEN-tk：孔内局部載荷試験は、これまで困難だったコンクリート表面から劣化が進行した構造物における『劣化深さ』『コンクリート強度低下深さ』の診断が可能な新しい技術です。

GoTEN-tk is a point load tester using a borehole to determine "the deteriorated depth" and "the strength degradation" of a concrete structure. This tester is able to measure them from the surface which was not able to be measured by conventional methods.



孔壁確認用 CCDカメラ
CCD Camera for viewing a borehole

載荷先端 φ6mm半球状
Round-tip of 6mm diameter

試験装置：φ40mm、長さ270mm
Device: 40mm diameter, 270mm long

1 コア削孔 Drilling of a borehole



削孔径はφ42mm以上

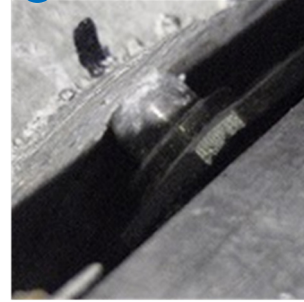
Drilling diameter is more than 42mm

2 試験装置の設置 Installation of the device



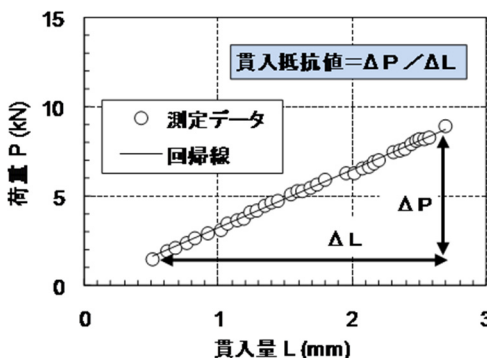
試験装置を強度を知りたい深度に挿入
Load position is selected by observing
in a borehole with fiberscope

3 孔壁への裁荷 Load to the borehole wall



載荷先端を孔壁へ貫入、荷重-貫入量
データを同一深度で6点程度取得
6 points data of the load and the amount
of penetration are obtained at the same
depth

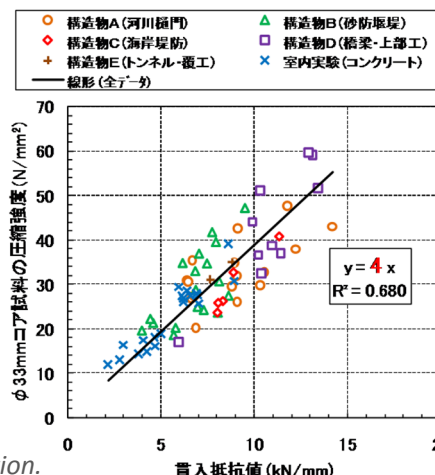
4 データ解析 Data verification and analysis



荷重-貫入量の関係から『貫入抵抗値』を算出

The value of penetration resistance is calculated by the relation of the load and the amount of penetration.

5 コンクリート強度推定 Estimation of concrete strength



これまでの室内試験の蓄積データから『貫入抵抗値』の4倍がコンクリート強度と推定することが可能

Based on the accumulated data of laboratory and in-situ tests, a concrete strength is able to be estimated by quadrupling the value of penetration resistance.