

KIYOTA LAB.

[Challenge of Geo-disaster Mitigation]

Department of Fundamental Engineering

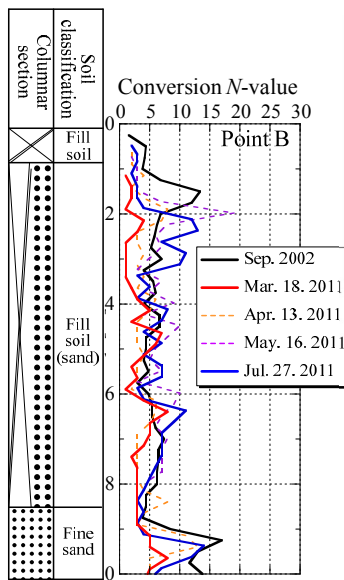
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Geo-disaster Mitigation Engineering

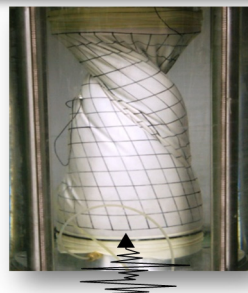
Department of Civil Engineering

Earthquake-induced Geo-disaster

Earthquake-induced damage to infrastructures is closely related to the geotechnical and geological factors. The 2011 off the Pacific coast of Tohoku Earthquake caused massive tsunami, and a large number of coastal levees which were constructed of geomaterials was destroyed. High ratio of occurrence of liquefaction was found in Kanto region, especially, in Tokyo bay area and downstream basin of Tone River which would be linked to the soft subsurface ground and reclamation site. Meanwhile, a large number of landslides was caused by the earthquake over a large extent of area in the eastern Japan. KIYOTA laboratory is working for mitigation measure of such geo-disasters based on field survey, in-situ and laboratory tests and simulation.

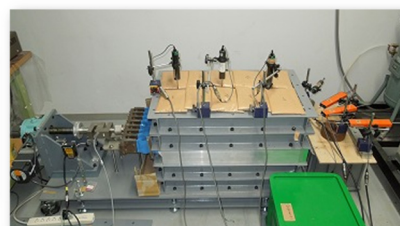
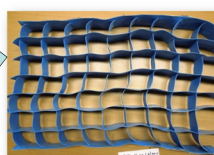
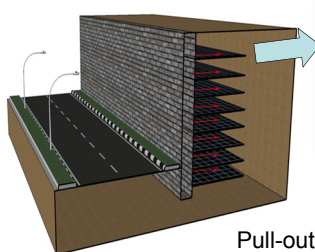


Ground subsidence map after liquefaction by Tohoku EQ



Breached dam body was LiDAR surveyed for its entire 3D image

Field investigation and laboratory test on liquefaction problem



Pull-out test and shaking table model test on newly developed Geo-cell reinforced retaining wall