

Site investigation and foundation design of wind power stations at German sites

Abstract: The application of seismic methods in geotechnical site investigation is used to determine the small strain shear stiffness in soils. Specific information about the reliability and the trust regions at the determined soil profiles are necessary to use these methods in geotechnical design processes. Due to non-unique inversion processes a trust region and a reliability of the soil profile has to be given for geotechnical design processes. The analyzed fields are reclaimed mining areas are loose artificial landfills of sand or undisturbed over-consolidated geological sites. To reduce the design risk and decrease the costs, a combination of conventional tests, seismic field tests and supplemental laboratory tests are proved to get the significant increase in information about the static and dynamic soil parameters for design purposes.