

## **Liquefaction potential of sand by torsional shear test**

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**ABSTRACT:** The liquefaction potential of saturated sand is estimated by using torsional shear. Laboratory tests indicate distinct patterns between torsional moment and rotation angle of cylinder embedded in sand for contracting and dilative behavior. Using corresponding relations, shear stress versus shear strain of sand adjacent to cylindrical surface is evaluated. By slightly modifying the standard penetration test, torsion shear tests were carried out. The predictions of liquefaction potential by torsional shear compares favorably with the predictions of standard penetration tests for liquefaction potential.