

## PERMISSION TO PHOTOCOPY JOURNAL PAPERS

Permission to photocopy for personal or internal reference beyond the limits in Sections 107 and 108 of the U.S. Copyright Law is granted by the American Society of Civil Engineers for libraries and other users registered with the Copyright Clearance Center, 21 Congress Street, Salem, Mass. 01970, provided the appropriate fee is paid to the CCC for all articles bearing the CCC code. Requests for special permission or bulk copying should be addressed to the Manager of Technical and Professional Publications, American Society of Civil Engineers.

## CONTENTS

<b>Investigation of Failures</b> <i>by Gerald A. Leonards</i> . . . . .	185
<b>Undisturbed Sampling of Saturated Sands by Freezing</b> <i>by Sukhmander Singh, H. Bolton Seed, and Clarence K. Chan</i> . . . . .	247
<b>Considerations in Undisturbed Sampling of Sands</b> <i>by H. Bolton Seed, Sukhmander Singh, Clarence K. Chan, and T. F. Vilela</i> . . . . .	265
<b>Shallow Foundations on Frozen Soil: A Bibliography</b> <i>by The Committee on Shallow Foundations of the Geotechnical Engineering Division</i> . . . . .	285

---

The Journal of the Geotechnical Engineering Division (ISSN 0093-6405) is published monthly by the American Society of Civil Engineers. Publications office is at 345 East 47th Street, New York, N.Y. 10017. Address all ASCE correspondence to the Editorial and General Offices at 345 East 47th Street, New York, N.Y. 10017. Allow six weeks for change of address to become effective. Subscription price to members is \$16.00. Nonmember subscriptions available; prices obtainable on request. Second-class postage paid at New York, N.Y. and at additional mailing offices. GT.

POSTMASTER: Send address changes to American Society of Civil Engineers, 345 East 47th Street, New York, NY 10017.

The Society is not responsible for any statement made or opinion expressed in its publications.

---

TECHNICAL NOTES

Proc. Paper 16837

---

<b>Pumped Bentonitic Mixture Used to Seal Piezometers</b> <i>by Claude A. Fetzer</i> . . . . .	295
<b>Utilization of Steel Rods as AE Waveguides</b> <i>by Arthur E. Lord Jr., Charles L. Fisk, and Robert M. Koerner</i> . . . . .	300
<b>Membrane Penetration in Triaxial Tests</b> <i>by K. V. Ramana and V. S. Raju</i> . . . . .	305
<b>Method to Predict Ultimate Compression in Clays</b> <i>by S. Narasimha Rao and K. Kodandaramaswamy</i> . . . . .	310
<b>Pore Pressure Rise during Cyclic Loading of Sands</b> <i>by Christos P. Tsatsanifos and Sarada K. Sarma</i> . . . . .	315
<b>Mapping Landslide Hazards in Forest Watersheds</b> <i>by Timothy J. Ward, Ruh-Ming Li and Daryl B. Simons</i> . . . . .	319

---

DISCUSSION

Proc. Paper 16832

---

<b>Cam-Clay Predictions of Undrained Strength</b> , by Paul W. Mayne (Nov., 1980. Prior Discussions: Jan., 1982). <i>closure</i> . . . . .	327
<b>Tension Resistant Inclusions in Soils,</b> <sup>a</sup> by Kamal Z. Andrawes, Alan McGown, Moshen M. Mashhour and Ragui F. Wilson-Fahmy (Dec., 1980). <i>by Robert P. Chapuis</i> . . . . .	330
<i>closure</i> . . . . .	333

---

<sup>a</sup>Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.