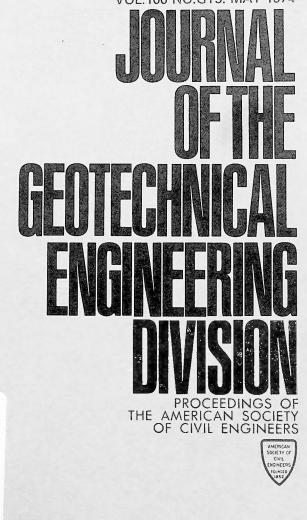
MILANO

# VOL.100 NO.GT5. MAY 1974



BitcOLD R ASCE 1974 5 2-R-55

#### AMERICAN SOCIETY OF CIVIL ENGINEERS

BOARD OF DIRECTION President Charles W. Yoder President-elect William M. Sangster Past President John E. Rinne Vice Presidents William R. Gibbs Ivan M. Viest Dean F. Peterson L. A. Woodman Directors Paul C. Hassler, Jr. William C. Ackerman Hugh W. Hempel Amos J. Alter Elmer B. Isaak B. Austin Barry Russel C. Jones Robert D. Bay Walter E. Blessey Thomas C. Kavanagh Bevan W. Brown, Jr. Oscar T. Lyon, Jr. John E. McCall Archie N. Carter Clarence W. E. Davies Jack McMinn Irvan F. Mendenhall Lyman R. Gillis Albert A. Grant Cranston R. Rogers Christopher G. Tyson **EXECUTIVE OFFICERS** Eugene Zwoyer, Executive Director Don P. Reynolds, Assistant Executive Director Joseph McCabe, Director-Education Services Edmund H. Lang, Director—Professional Services Paul A. Parisi, Director—Publication Services Albert W. Turchick, Director-Technical Services William D. French, Director-Support and Administrative Services William N. Carey, Secretary Emeritus William H. Wisely, Executive Director Emeritus William S. LaLonde, Jr., Treasurer Robert H. Dodds, Assistant Treasurer COMMITTEE ON PUBLICATIONS Walter E. Blessey, Chairman Jack H. McMinn, Vice Chairman Bevan W. Brown, Jr. Clarence W. E. Davies Archie N. Carter John E. McCall GEOTECHNICAL ENGINEERING DIVISION Executive Committee Roy E. Olson, Chairman George F. Sowers, Vice Chairman Joseph M. DeSalvo John Lysmer Kenneth L. Lee, Secretary Jack W. Hill, Management Group E Contact Member ublications Committee E. T. Selig, Chairman L. J. Langfelder G. B. Clark T. K. Liu David J. D'Appolonia Ulrich Luscher C. M. Duke Gholamreza Mesri James M. Duncan Victor Milligan R. D. Ellison N. Morgenstern H. L. Gill D. H. Gray Donald J. Murphy Iraj Noorany P. C. Rizzo D. J. Hagerty W. G. Shockley Kaare Hoeg H. M. Horn D. H. Shields C. V. Girija Vallabhan J. R. Hall, Jr. Izzat M. Idriss A. S. Vesic H. Y. Ko R. J. Woodward, Jr. R. J. Krizek C. C. Ladd S. G. Wright T. H. Wu R. N. Yong Kenneth L. Lee, Exec. Comm. Contact Member PUBLICATION SERVICES DEPARTMENT Paul A. Parisi, Director **Technical Publications** Richard R. Torrens, Editor Robert D. Walker, Associate Editor Geraldine Cioffi, Assistant Editor Virginia F. Tyler, Editorial Assistant Patricia A. Goldenberg, Editorial Assistant Evelyn Greenspan, Editorial Assistant Nadja Landau, Editorial Assistant Frank J. Loeffler, Draftsman

Information Services

ITYING Amron, Editor

## CONTENTS

Yielding of Sand in Plane Strain by Sam Frydman	491
Tjipanundjang Dam in West Java, Indonesia by Laurence D. Wesley	503
Seismic Stability of Upper San Leandro Dam by Bernard B. Gordon, David J. Dayton, and Khosrow Sadigh	523

### DISCUSSION

Proc. Paper 10504

Strength Properties of Chemically Solidified Soils, by James Warner (Nov., 1972, Prior Discussions: Aug., Oct., 1973).	
closure	549
Comments on Conventional Design of Retaining Structures, by Leo Casagrande (Feb., 1972. Prior Discussions: Aug., Oct., 1973). closure	552
Factors Affecting Coefficient of Earth Pressure Ko,* by	552
Kamal Z. Andrawes and Mohamed A. El-Sohby (July, 1973).	
by Umesh Dayal and J. H. Allen	
by B. K. Ramiah and S. P. Raghunath	355

This Journal 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 \$8.00. Nonmember subscriptions available; prices obtainable on request. Second-class postage paid at New York, N.Y. and at additional mailing offices. HY, GT.

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

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

Compaction Grouting,* by Douglas R. Brown and James	
Warner (Aug., 1973. Prior Discussion: Mar., 1974).	
by H. Y. Wong	556
Axial Stress-Strain Characteristics of Sand <sup>a</sup> by Herbert Breth, Ernst	
Schuster, and Prabhakar Pise (Aug., 1973).	
by Eldon Burley, Roger C. Harvey, and Arthur W. T. Daniel	559
Residual Strength and Landslides in Clay and Shale," by Herbert	
L. Noble (Sept., 1973).	
by Richard J. Chandler	560
Response of Embedded Footings to Vertical Vibrations," by M.	
Anandakrishnan and N. R. Krishnaswamy (Oct., 1973).	
by Milos Novak	562
errala	563

### **TECHNICAL NOTES**

Proc. Paper 10510

Embankment Instrumentation Tunnel Performance

by Charles H. Dowding, T. William Lambe, and L. Anthony Wolfskill 567

### INFORMATION RETRIEVAL

The key words, abstract, and reference "cards" for each article in this Journal represent part of the ASCE participation in the EJC information retrieval plan. The retrieval data are placed herein so that each can be cut out, placed on a  $3 \times 5$  card and given an accession number for the user's file. The accession number is then entered on key word cards so that the user can subsequently match key words to choose the articles he wishes. Details of this program were given in an August, 1962 article in CIVIL ENGINEERING, reprints of which are available on request to ASCE headquarters.

\*Discussion period closed for this paper. Any other discussion received during this discussion period will be published in subsequent Journals.