Sixty-second Annual Meeting Papers

Papers on

SOILS
1959 MEETINGS

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AMERICAN SOCIETY FOR TESTING MATERIALS
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Symposium on Time Rates of Loading in Soil Testing
Symposium on Atterberg Limits
Session on Soils
Symposium on Soils for Engineering Purposes

Presented at the
SIXTY-SECOND ANNUAL MEETING
Atlantic City, N. J., June 22–23, 1959
and Third Pacific Area National Meeting
San Francisco, Calif., October 16, 1959
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FOREWORD

The papers and discussions included in this publication were sponsored by Committee D-18 on Soils for Engineering Purposes and presented at a Symposium on Time Rates of Loading in Soil Testing, a Symposium on Atterberg Limits, and a Session on Soils held during the Sixty-second Annual Meeting of the Society in Atlantic City, N. J., the week of June 21–26, 1959, and also at a Symposium on Soils for Engineering Purposes held during the Third Pacific Area Meeting of the Society at San Francisco, Calif., the week of October 11–16, 1959.

Strain-rate effects, consolidation of clays and soils and repeated loading measurement, as well as a survey covering the literature from 1846 to 1958 on dynamic and static resistance of cohesive soils are considered in the eight papers of the Symposium on Time Rates of Loading in Soil Testing.

The history and the development of the well known Atterberg limits tests and the various methods for determining the liquid limit of soils using the one-point method, the penetration tests, results obtained from various grooving tools, and the tube and standard test methods for plastic limit are considered and discussed in the nine papers of the Symposium on Atterberg Limits.

Three additional papers presented at a Session on Soils cover such problems as laboratory and field tests on cement-treated granular base-course materials, powder *versus* slurry application of lime for soil stabilization, and the determination of preconsolidation pressure of a sensitive clay.

D. M. Burmister, Columbia University, presided at the Symposium on Time Rates of Loading in Soil Testing session and acted as chairman of this symposium with L. E. Gregg, L. E. Gregg and Associates, as co-chairman. The session of the Symposium on Atterberg Limits was presided over by G. F. Sowers, Georgia Institute of Technology, who also acted as chairman of the symposium. The Session on Soils was presided over by W. H. Goetz, Purdue University.

The remaining nine papers were presented at the Symposium on Soils for Engineering Purposes at the Third Pacific Area National Meeting of the Society in San Francisco, Calif. F. S. Converse, Converse Foundation Engineering, presided over the first session, H. de Bussiers, Curtis and Tompkins, Ltd., and R. Lundgren, Woodward, Clyde, Sherard, and Associates, presided over the second session.

The papers cover problems related to soil density and moisture content, load and compression testing, and a proposed classification system for soils.

NOTE.—The Society is not responsible, as a body, for the statements and opinions advanced in this publication.

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THIS PUBLICATION is one of many issued by the American Society for Testing Materials in connection with its work of promoting knowledge of the properties of materials and developing standard specifications and tests for materials. Much of the data result from the voluntary contributions of many of the country's leading technical authorities from industry, scientific agencies, and government.

Over the years the Society has published many technical symposiums, reports, and special books. These may consist of a series of technical papers, reports by the ASTM technical committees, or compilations of data developed in special Society groups with many organizations cooperating. A list of ASTM publications and information on the work of the Society will be furnished on request.