

TESTING FORUM

Committee D-18 News

New Standard

A document containing standard practices for handling and supporting soil samples has been developed by ASTM Committee D-18 on Soil and Rock. This standard, now available from ASTM, may be used for soils contaminated with hazardous materials, subject to quarantine regulations.

The standard document, Practices for Preserving and Transporting Soil Samples (D 4220), was written under the jurisdiction of ASTM Subcommittee D18.02 on Sampling and Related Field Testing for Soil Investigations.

According to Gordon R. Eischens, chairman of the D18.02 Task Group on Packaging, Transportation and Storage of Samples, "Use of the procedures recommended in the standard should provide more reliable test sample conditions for soil testing labs, civil engineers, and geotechnical engineers."

The use of the various methods in ASTM D 4220 is dependent on the type of samples obtained, the type of testing and engineering properties required, the fragility and sensitivity of the soil, and the climatic conditions. The procedures documented in the standard are illustrated.

ASTM Committee D-18 is concerned with the development of voluntary consensus standards for soil, rock, and the fluids contained therein.

ASTM standard document D 4220 is available for \$8.00 from the ASTM Sales Services Department, 1916 Race Street, Philadelphia, PA 19103, 215/299-5585. For more information on the technical aspects of the standard, contact Gordon R. Eischens, Soil Exploration Company, 662 Cromwell Avenue, St. Paul, MN 55144, 612/645-6446.

Cement Grouting Standards

A one-day ASTM seminar, "Areas Requiring Standardization in Cement Grouting Practice," will be held 24 Jan. 1984 at the Country Hotel in San Diego, CA. The seminar is sponsored by ASTM Subcommittee D18.16 on Grouting, a branch of Committee D-18 on Soil and Rock, and will be held in conjunction with the 23-25 Jan. 1984 meetings of Committee D-18 at the Country Hotel.

The purpose of the program is to define areas of cement grouting practice that should be standardized and to assign priorities for sequential development of the needed standards by ASTM Subcommittee D18.16. The grouting committees of the American Society of Civil Engineers (ASCE), the Association of Engineering Geologists (AEG), and the American Concrete Institute (ACI) will cosponsor the seminar with ASTM. Representatives of other technical societies and anyone interested in the topic are urged to attend.

Anyone wishing to make a formal presentation at the January seminar or needing additional information should contact ASTM Subcommittee D18.16 Chairman R. H. Karol, Rutgers University, P.O. Box 909, Piscataway, NJ 08854, 201/932-4454.

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Information on the work of Subcommittee D18.16 may also be obtained from Bob Morgan, ASTM Standards Development Division, 1916 Race Street, Philadelphia, PA 19103, 215/299-5505.

Award for Editorial Excellence

Ernest T. Selig, professor of civil engineering at the University of Massachusetts in Amherst, was honored with the ASTM Committee on Publications Award for Editorial Excellence (Fig. 1).

Selig, a resident of Harkness Road in Amherst, received the award in recognition of his outstanding service to ASTM in creating the *Geotechnical Testing Journal* and maintaining its continued and current viability. He was presented the award at a meeting hosted by ASTM Committee D-18 on Soil and Rock held 20 June 1983 in Kansas City, MO.

In the mid-1970s, Selig recognized the need for a publication for those concerned with the measurement and testing of soil and rock materials. His energy and enthusiasm for this project helped gain the support of ASTM Committee D-18. Selig developed the objectives of the publication and, through his continuous efforts and those of Committee D-18, the ASTM Committee on Publications approved the publication of the *Geotechnical Testing Journal* in 1978. Selig continues to head the editorial board of this widely recognized publication that publishes major technical papers, suggested methods, technical notes, abstracts, and reviews.

In addition to his contributions to ASTM, Selig is active in the American Society of Civil Engineers, the American Railway Engineering Association, the Transportation Research Board, and the International Society for Soil Mechanics and Foundation Engineering.

A native of Harrisburg, PA, Selig received a BME degree in mechanical engineering from Cornell University in 1957, and both an MS degree in mechanics and a PhD degree in civil engineering



FIG. 1—Robert C. Deen (left), First Vice-Chairman of Committee D-18, presents the ASTM Award for Editorial Excellence to Ernest T. Selig (right).

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from the Illinois Institute of Technology (IIT) in 1960 and 1964, respectively.

Selig worked as a research engineer and manager of soil mechanics research at ITT Research Institute from 1957 to 1968. He held the position of professor of civil engineering at the State University of New York at Buffalo from 1968 to 1978, the year he obtained his present position. As a specialist in geotechnical engineering, Selig's emphasis has been in the areas of soil compaction, soil dynamics, soil-structure interaction, railroad track performance, and instrumentation. In addition to teaching and research, Selig has also done consulting work for private and government organizations with geotechnical engineering problems.

ASTM Award of Merit

John W. Guinnee, retired engineer of soil, geology and foundations, for the Transportation Research Board, National Academy of Sciences, Washington, DC, was named a recipient of the ASTM 1983 Award of Merit (Fig. 2). ASTM is a management system composed of 30 000 members responsible for the development of voluntary consensus standards used by industries and consumers worldwide.

A resident of Silver Spring, MD, Guinnee was presented the award at the 21 June 1983 meeting of ASTM Committee D-18 on Soil and Rock at the Crown Center Hotel in Kansas City, MO. Guinnee was cited for his contributions to voluntary standards development and perfection, the accreditation of laboratories, and the technical cross-fertilization among the testing and research laboratories of State Highway Departments and ASTM committees.

A native of Council Bluffs, IA, Guinnee received his BS degree in civil engineering from the University of Missouri at Columbia in 1943, and his MS degree in the same in 1946 from Princeton University.



FIG. 2—William A. Goodwin (left), Past Chairman of the ASTM Board, presenting the ASTM Award of Merit to John W. Guinnee (right).

Guinnee worked for 15 years as a soil research engineer in the Missouri Department of Highways before joining the Transportation Research Board in 1967, where he remained until his retirement in July 1982. He has conducted research in the areas of soil mechanics, soil science, and soil engineering, as they relate to transportation facilities.

Throughout his career, Guinnee has visited every major state in the United States, introducing standardization into highway laboratories. Guinnee joined ASTM Committee D-18 on Soil and Rock in 1964. He served as membership secretary, from 1970 to 1974, and first vice-chairman of the committee from 1976 to 1980. He also served as chairman of ASTM D19.96 on Research Steering and Standards Development from 1975 to 1979.

Guinnee was the recipient of the Committee D-18 Special Award, and in 1980, was the second recipient of the Committee's Outstanding Achievement Award, their highest honor.

A registered professional engineer in Missouri, Guinnee is the author of four technical publications in his field of expertise.

Guinnee is a member of the American Society of Civil Engineers, the International Conference on Soil Mechanics and Foundation Engineering, and the American Road and Transportation Builders Association.

Additional Awards

In addition to the ASTM Award of Merit, J. W. Guinnee received the Award for Honorary Membership of Committee D-18 (Fig. 3). He was presented the award at a meeting hosted by ASTM Committee D-18 on Soil and Rock held 20 June 1983 in Kansas City, MO.

The Hogentogler Award and the Frank W. Reinhart Award were also presented to H. R. Hardy and A. Ivan Johnson, respectively, at this meeting (Figs. 4 and 5). ASTM Special Service Awards were presented to Ken Saucier, Bob Packard, and J. W. Guinnee.



FIG. 3—John W. Guinnee (right) receiving the Honorary Member of ASTM Committee D-18 Award from Adrian Pelzner (left), chairman of Committee D-18.

TESTING FORUM



FIG. 4—William A. Goodwin (left) presents the Hogentogler Award to H. R. Hardy (right).



FIG. 5—William A. Goodwin (left) presenting the Frank W. Reinhart Award to A. Ivan Johnson (right).

ASTM Hosts Symposium

The shear strength of marine sediments is currently determined through a variety of laboratory and in-situ test methods. An assessment of the state of the art of such methods will be the focus of a two-day Symposium on Laboratory and In Situ Strength Testing of Marine Soils sponsored by ASTM Committee D-18 on Soil and Rock. The symposium will be held on 26–27 Jan. 1984 at the Town and Country Hotel in San Diego, CA.

“The information discussed at this symposium should aid in the development of new standard methods, the improvement of older methods, and a greater reproducibility of results between different methods,” according to Symposium Cochairman Ken R. Demars of the University of Connecticut. Also chairing the symposium is Ronald C. Chaney of Humboldt State University, Arcata, CA.

The symposium is being held in conjunction with the 23–25 Jan. 1984 standards-writing meetings of Committee D-18 at the same location. These meetings, as well as the symposium, are open and free of charge. A special technical publication based on the symposium is anticipated by ASTM.

The program is divided into two sessions: In Situ Determination of the Strength of Marine Soils (Thursday, 26 Jan.) and Laboratory Determination of the Strength of Marine Soils (Friday, 27 Jan.). Twenty-five papers will be presented over the two-day period, and a question and answer session will be held each morning.

Topics covered include a comparison of laboratory and in situ testing, preparation of soft samples; shipboard testing methods, and strength behavior of marine sediments.

For more information, contact the symposium cochairmen, Ronald C. Chaney, Department of Environmental Resources Engineering, Humboldt State University, Arcata, CA 95521, 707/826-4992; or Ken R. Demars, University of Connecticut, Department of Civil Engineering, Storrs, CT 06286, 203/486-4017; or Robert J. Morgan, ASTM, 1916 Race Street, Philadelphia, PA 19103, 215/299-5505.

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SI Conversion Factors for Geotechnical Engineering

During the past several years, Subcommittee D18.93, through the initiative of Marshall Silver, has developed a table of factors for converting U.S. customary and metric units into SI units. The objective is to assist authors in converting their results into SI units and to promote uniformity in the use of SI units in geotechnical engineering. Additional information on the SI system can be obtained from ASTM Metric Practice Guide (E 380) and "SI Units in Geotechnical Engineering," by R. D. Holtz in the *Geotechnical Testing Journal*, Vol. 3, No. 2, June 1980, pp. 73-79. Comments from the profession are invited as letters either to the editor for publication in the journal or to Subcommittee D18.93 for its consideration.

Ernest T. Selig
Technical Editor

To Convert From	To	Multiply By
Length		
inches (in.)	millimetres (mm)	25.4
inches (in.)	metres (m)	0.0254
feet (ft)	metres (m)	0.305
miles (miles)	kilometres (km)	1.61
yards (yd)	metres (m)	0.914
Area		
square inches (in. ²)	square centimetres (cm ²)	6.45
square feet (ft ²)	square metres (m ²)	0.0929
square yards (yd ²)	square metres (m ²)	0.836
acres (acre)	square metres (m ²)	4047
square miles (miles ²)	square kilometres (km ²)	2.59
Volume		
cubic inches (in. ³)	cubic centimetres (cm ³)	16.4
cubic feet (ft ³)	cubic metres (m ³)	0.0283
cubic yards (yd ³)	cubic metres (m ³)	0.765
Mass		
pounds (lb)	kilograms (kg)	0.454
tons (ton)	kilograms (kg)	907
Force		
one pound force (lbf)	newtons (N)	4.45
one kilogram force (kgf)	newtons (N)	9.81
Pressure or Stress		
pounds per square foot (psf)	kilonewtons per square metre (kN/m ²) or kilopascals (kPa)	0.0479
pounds per square inch (psi)	kilonewtons per square metre (kN/m ²) or kilopascals (kPa)	6.89
kilogram force per square centimetre (kgf/cm ²)	kilonewtons per square metre (kN/m ²) or kilopascals (kPa)	98.1
Liquid Measure		
gallon (gal)	cubic metres (m ³)	0.0038
acre-feet (acre-ft)	cubic metres (m ³)	1233
Quantity of Flow		
gallons per minute (gal/min)	cubic metres per minute (m ³ /min)	0.0038
cubic feet per minute (ft ³ /min)	cubic metres per minute (m ³ /min)	0.0283
Mass Density		
pounds per cubic foot (pcf)	megagrams per cubic metre (Mg/m ³)	0.0160
kilonewtons per cubic metre (kN/m ³)	megagrams per cubic metre (Mg/m ³)	0.102

$$^{\circ}\text{F} = 1.8 \text{ Temp } ^{\circ}\text{C} + 32$$

$$^{\circ}\text{C} = (\text{Temp } ^{\circ}\text{F} - 32)/1.8$$



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1983 MEMBERSHIP APPLICATION

ASTM Committee D-18 on Soil and Rock

Scope

The promotion of knowledge; stimulation of research; the development of specifications and methods for sampling and testing; and the development of nomenclature, definitions, and practices relating to the properties and behavior of soil, rock, and the fluids contained therein. Excluded are the uses of rock for building stone and for constituent materials in portland cement and bituminous paving and structures coming under the jurisdiction of other committees. Included are the properties and behavior of: (1) soil-like materials such as peats and related organic materials, (2) geotextiles, and (3) fluids occupying the pore spaces, fissures, and other voids in soil and rock insofar as such fluids may influence the properties, behavior, and uses of the soil and rock materials.

Officers

Chairman: Adrian Pelzner, U.S. Agricultural Forest Service, Engineering Div., P.O. Box 2417, Washington, DC 20013.

First Vice-Chairman: Robert C. Deen, University of Kentucky, Kentucky Transportation Research Program, Transportation Research Bldg., Lexington, KY 40506.

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D18.04 Hydrologic Properties of Soil and Rock

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