Geotechnical Testing Journal
Subject Index
Volume 19, 1996

A-B

Adsorption isotherm
Discussion on “Geo-environmental assessment of a micaceous soil for its potential use as an engineered clay barrier” by A. M. O. Mohamed, R. N. Yong, B. K. Tan, A. Farkas, and L. W. Curtis, (Bajracharya, K, Barry, DA, and Culligan, PJ), Dec., 452

Advection-dispersion equation
Discussion on “Geo-environmental assessment of a micaceous soil for its potential use as an engineered clay barrier” by A. M. O. Mohamed, R. N. Yong, B. K. Tan, A. Farkas, and L. W. Curtis, (Bajracharya, K, Barry, DA, and Culligan, PJ), Dec., 452

Aggregate
Grain-size distribution of mixed aggregates (Windisch, EJ), June, 227

Air volume change measurement
Air volume change measurement in unsaturated soil testing using a digital pressure-volume controller, (Adams, BA, Wulfsohn, D, and Fredlund, DG), March, 12

Airflow
Proposed standard test method for measurement of pneumatic permeability of partially saturated porous materials by flowing air (Eischens, G and Swanson, A), June, 232

Anchoring
Laboratory testing apparatus for slopes stabilized by anchored geosynthetics, (Ghiaissian, H, Hryciw, RD, and Gray, DH), March, 65

Atterberg Limits
Method of rapid determination of the plasticity index of calcareous materials used in road construction (Melachrinos, B), Dec., 438

Automation
Using an automated rowe cell for constant rate of strain consolidation testing (Sheahan, TC and Watters, PJ), Dec., 354
Measuring anisotropic elastic properties of sand using a large triaxial specimen, (Hoque, E, Tatsuoka F, and Sato, T), Dec., 411

Bentonite
Determining bentonite content in soil-bentonite mixtures using electrical conductivity (Abu-Hassanen, ZS, Benson, CH, Wang, X, and Blotz, LR), March, 51

Boundary conditions
Model size effects in centrifuge models of granular slope instability (Goodings, DJ and Gillette, DR), Sept., 277

Brazilian test
High-temperature Brazilian test for tensile strength of metamorphic limestone, (Lee, D-H, Juang, CH, and Lei, I-M), June, 223

Bulk density
Rock porosity determinations using particle densities measured in different fluids (Passas, N, Butenuth, C, de Freitas, MH, and Bunatova, V), Sept., 310

C-D

Calcareous sands
Tests on model jacked piles in calcareous sand (Chin, JT and Poulos, HG), June, 164

Capillary phenomena
Advances in conductometric phase transition porosimetry (Gunnink, BW), March, 74

Cement-treated soils
Evaluation of sulfate expansion in soil-cements (Ksaibati, K and Huntington, GS), Sept., 269

Centrifuges
Thermally controlled test chamber for centrifuge and laboratory experiments, (Stone, KJL, Smith, CC, and Schofield, AN), Dec., 441
Centrifuge testing of fixed-head laterally loaded battered and plumb pile groups in sand, (McVay, MC, Shang, T-I, and Casper, R), March, 41

Classification
Simplification of soil classification charts derived from the cone penetration test (Zhang, Z and Tumay, MT), June, 203

Clays
Method of rapid determination of the plasticity index of calcareous materials used in road construction (Melachrinos, B), Dec., 438
Using an automated rowe cell for constant rate of strain consolidation testing (Sheahan, TC and Watters, PJ), Dec., 354
Study of strike-slip faulting using small-scale models (Lazarte, CA and Bray, JD), June, 118
Consolidation behavior of clayey soils under radial drainage, (Sridharan, A, Prakash, K, and Asha, SR), Dec., 421

Clay shales
Constant volume ring shear apparatus (Stark, TD and Contreras, IA), March, 3

Clay structure
Advances in conductometric phase transition porosimetry (Gunnink, BW), March, 74

Coal mine wastes
Comparison of gas and water pycnometry of coal mine wastes (Morris, PH and Williams, DJ), March, 95

Coaxial cable
Water pressure measurement with time domain reflectometry cables, (Dowding, CH, Huang, F-C, and McComb, PS), March, 58

Coefficient of consolidation
Determination of coefficient of consolidation from early stage of log t plot (Robinson, RG and Allam, MM), Sept., 316
Consolidation behavior of clayey soils under radial drainage, (Sridharan, A, Prakash, K, and Asha, SR), Dec., 421

Coefficient of permeability
Analysis of hydraulic gradient effects for laboratory hydraulic conductivity testing (Fox, PJ), June, 181
Direct and indirect permeability of fissured tills (Hossain, D), June, 191

Compressibility testing
Consolidation behavior of clayey soils under radial drainage, (Sridharan, A, Prakash, K, and Asha, SR), Dec., 421

Compressive waves
Measurement of shear waves in laboratory specimens by means of piezoelectric
transducers, (Brignoli, EGM, Gotti, M, and Stokoe, KH, II), Dec., 384

Conductometric phase transition porosimetry
Advances in conductometric phase transition porosimetry (Gunnink, BW), March, 74

Cone penetration tests
Simplification of soil classification charts derived from the cone penetration test (Zhang, Z and Tumay, MT), June, 203

Conformal mapping
Simplification of soil classification charts derived from the cone penetration test (Zhang, Z and Tumay, MT), June, 203

Consolidation
Using an automated Rowe cell for constant rate of strain consolidation testing (Sheahan, TC and Watters, PJ), Dec., 354

Consolidation apparatus for testing unsaturated soils (Rahardjo, H and Fredlund, DG), Dec., 341

Direct and indirect permeability of fissured tills (Hossain, D), June, 191

Cyclic loading
Tests on model jacked piles in calcareous sand (Chin, JT and Poulos, HG), June, 164

Degree of consolidation
Determination of coefficient of consolidation from early stage of log t plot (Robinson, RG and Allam, MM), Sept., 316

Diffusion test
New technique for diffusion testing of unsaturated soil, (Barbour, SL, Lim, PC, and Fredlund, DG), Sept., 247

Digital pressure-volume controller
Air volume change measurement in unsaturated soil testing using a digital pressure-volume controller, (Adams, BA, Wulfsohn, D, and Fredlund, DG), March, 12

Direct shear testing
Automated apparatus for three-dimensional monotonic and cyclic testing of interfaces (Fakharian, K and Evgin, E), March, 22

Drainage systems
Consolidation behavior of clayey soils under radial drainage, (Sridharan, A, Prakash, K, and Asha, SR), Dec., 421

Drilled shafts
Large-scale model testing of laterally loaded drilled shafts in sand, (Agaiby, SW, Kulhawy, FH, and Trautmann, CH), March, 32

Electrical conductivity
Determining bentonite content in soil-bentonite mixtures using electrical conductivity (Abu-Hassanein, ZS, Benson, CH, Wang, X, and Blotz, LR), March, 51

Measurements of soluble salt content of soils from arid and semi-arid regions (Karakuozian, M, Pitchford, A, Leonard, M, and Johnson, B), Dec., 364

Environmental conditions
Thermally controlled test chamber for centrifuge and laboratory experiments, (Stone, KHL, Smith, CC, and Schofield, AN), Dec., 441

Failure
Model size effects in centrifuge models of granular slope instability (Goodings, DJ and Gillette, DR), Sept., 277

Faults
Study of strike-slip faulting using small-scale models (Lazarte, CA and Bray, JD), June, 118

Field tests
Effect of rib spacing on deformation of profile-wall plastic pipes buried in coarse granular backfill, (Sargand, S, Masada, T, and Hurd, JO), June, 217

Fine-grained soils
Direct and indirect permeability of fissured tills (Hossain, D), June, 191

Flow pump
Rigorous theoretical analysis of a flow pump permeability test (Esaki, T, Zhang, M, Takeshita, A, and Mitani, Y), Sept., 241

Foundations
Large-scale model testing of laterally loaded drilled shafts in sand, (Agaiby, SW, Kulhawy, FH, and Trautmann, CH), March, 32

Free-field
Device for the measurement of sub-surface ground vibrations, (Leong, EC, Cheong, HK, and Pan, TC), Sept., 286

Friction
Discussion on "A dual interface apparatus for testing unrestricted friction of soil along surfaces" by S. G. Paikowsky, C. M. Player, and P. J. Connors, (Subba Rao, KS, Allam, MM, and Robinson, RG), Dec., 446

Gas pycnometry
Comparison of gas and water pycnometry of coal mine wastes (Morris, PH and Williams, DJ), March, 95

Geotextile
Cylindrical expansion test for tensile properties of geotextiles, (Salman, AG, Jurian, I, and Potnis, A), Dec., 432

Gradation
Grain-size distribution of mixed aggregates (Windisch, EJ), June, 227

Grain size
Model size effects in centrifuge models of granular slope instability (Goodings, DJ and Gillette, DR), Sept., 277

Granular materials
Discussion on "A dual interface apparatus for testing unrestricted friction of soil along surfaces" by S. G. Paikowsky, C. M. Player, and P. J. Connors, (Subba Rao, KS, Allam, MM, and Robinson, RG), Dec., 446
Automated determination of the distribution of local void ratio from digital images (Frost, JD and Kuo, C-Y), June, 107

H–J

Helium
Comparison of gas and water pycnometry of coal mine wastes (Morris, PH and Williams, DJ), March, 95

Hydraulic conductivity
Analysis of hydraulic gradient effects for laboratory hydraulic conductivity testing (Fox, PJ), June, 181

Hydraulic gradient
Analysis of hydraulic gradient effects for laboratory hydraulic conductivity testing (Fox, PJ), June, 181

Image analysis
Automated determination of the distribution of local void ratio from digital images (Frost, JD and Kuo, C-Y), June, 107

In situ measurement
Flexible strain gage for soil testing (Li, XS), Sept., 305

Inductance
Flexible strain gage for soil testing (Li, XS), Sept., 305

Inorganic chemicals
New technique for diffusion testing of unsaturated soil, (Barbour, SL, Lim, PC, and Fredlund, DG), Sept., 247

Interface testing
Automated apparatus for three-dimensional monotonic and cyclic testing of interfaces (Fakharian, K and Evgin, E), March, 22

Interlaboratory testing
Interlaboratory Program for Rock Properties: Round two—Confined compression: Young’s Modulus, Poisson’s Ratio, and ultimate strength (Pincus, HJ), Sept., 321

Interlaboratory Program for Rock Properties: Round three—Repeatability and
Reproducibility of RQD Values for Selected Sedimentary Rocks (Pincus, HJ and Cliff, SJ), Dec., 457

**Jacked piles**

Tests on model jacked piles in calcareous sand (Chin, JT and Poulos, HO), June, 164

**L–M**

**Laboratory testing**

Discussion on "A dual interface apparatus for testing unrestricted friction of soil along surfaces" by S. G. Paikowsky, C. M. Player, and P. J. Conners, (Subba Rao, KS, Allam, MM, and Robinson, RG), Dec., 446

Laboratory evaluation of horizontal stress in overconsolidated sands (Abdi, H and Garga, VK), March, 85

**Landfills**

Determining bentonite content in soil-bentonite mixtures using electrical conductivity (Abu-Hassanein, ZS, Benson, CH, Wang, X, and Blotz, LR), March, 51

**Lateral loads**

Centrifuge testing of fixed-head laterally loaded battered and plumb pile groups in sand, (McVay, MC, Shang, T-I, and Casper, R), March, 41

**Latex coil**

Flexible strain gage for soil testing (Li, XS), Sept., 305

**Lightweight fill**

Engineering properties of tire/soil mixtures as a lightweight fill material (Masad, E, Taha, R, Ho, C, and Papangianakis, T), Sept., 297

**Limestones**

Method of rapid determination of the plasticity index of calcareous materials used in road construction (Melachrinos, B), Dec., 438

**Loading**

Consolidation apparatus for testing unsaturated soils (Rahardjo, H and Fredlund, DG), Dec., 341

**Local void ratio**

Automated determination of the distribution of local void ratio from digital images (Frost, JD and Kuo, C-Y), June, 107

**Marine sediments**

Multi-sensor piezometer for shallow marine sediments in coastal environments (Andersen, GR, Bennett, RH, Barber, ME, Todorovski, L, and Maynard, GL), Dec., 373

**Matric suction sensor**

Consolidation apparatus for testing unsaturated soils (Rahardjo, H and Fredlund, DG), Dec., 341

**Mix**

Grain-size distribution of mixed aggregates (Windisch, DJ), June, 227

**Model test**

Thermally controlled test chamber for centrifuge and laboratory experiments, (Stone, KJL, Smith, CC, and Schofield, AN), Dec., 441

Large-scale model testing of laterally loaded drilled shafts in sand, (Agaihy, SW, Kulhawy, FH, and Trautmann, CH), March, 32

**Moisture**

Coupled heat and moisture flow in unsaturated swelling clay barriers (Mohamed, AMO, Yong, RN, Onofrej, CI, and Kjartansson, BH), June, 155

**N–P**

**Near-field effect**

Measurement of shear waves in laboratory specimens by means of piezoelectric transducers, (Brignoli, EGM, Gotti, M, and Stokoe, KH, II), Dec., 384

**Necking**

Effects of shear band formation in triaxial extension tests, (Lade, PV, Yamamuro, JA, and Skryers, BD), Dec., 398

**Nitrogen**

Comparison of gas and water pycnometry of coal mine wastes (Morris, PH and Williams, DJ), March, 95

**Ottawa sand**

Engineering properties of tire/soil mixtures as a lightweight fill material (Masad, E, Taha, R, Ho, C, and Papangianakis, T), Sept., 297

**Overconsolidation**

Laboratory evaluation of horizontal stress in overconsolidated sands (Abdi, H and Garga, VK), March, 85

**Particle density**

Rock porosity determinations using particle densities measured in different fluids (Passas, N, Butenuth, C, de Freitas, MH, and Bunatova, V), Sept., 310

**Pavements**

Alternative test method for resilient modulus of fine-grained subgrades (Drumm, EC, Li, Z, Reeves, JS, and Madgett, MR), June, 141

**Peak strength**

Automated apparatus for three-dimensional monotonic and cyclic testing of interfaces (Fakharian, K and Evgin, E), March, 22

**Permeability**

Proposed standard test method for measurement of pneumatic permeability of partially saturated porous materials by flowing air (Eischens, G and Swanson, A), June, 232

Rigorous theoretical analysis of a flow pump permeability test (Esaki, T, Zhang, M, Takeshita, A, and Mitani, Y), Sept., 241

**Physical models**

Study of strike-slip faulting using small-scale models (Lazarte, CA and Bray, JD), June, 118

**Piezometer probe**

Multi-sensor piezometer for shallow marine sediments in coastal environments (Andersen, GR, Bennett, RH, Barber, ME, Todorovski, L, and Maynard, GL), Dec., 373

**Pile groups**

Centrifuge testing of fixed-head laterally loaded battered and plumb pile groups in sand, (McVay, MC, Shang, T-I, and Casper, R), March, 41

**Plastic pipe**

Effect of rib spacing on deformation of profile-wall plastic pipes buried in coarse granular backfill, (Sargand, S, Masada, T, and Hurd, JO), June, 217

**Plasticity**

Method of rapid determination of the plasticity index of calcareous materials used in road construction (Melachrinos, B), Dec., 438

**Pneumatic permeability**

Proposed standard test method for measurement of pneumatic permeability of partially saturated porous materials by flowing air (Eischens, G and Swanson, A), June, 232

**Pore pressure**

Multi-sensor piezometer for shallow marine sediments in coastal environments (Andersen, GR, Bennett, RH, Barber, ME, Todorovski, L, and Maynard, GL), Dec., 373

**Porosity**

Rock porosity determinations using particle densities measured in different fluids (Passas, N, Butenuth, C, de Freitas, MH, and Bunatova, V), Sept., 310

**Profile wall**

Effect of rib spacing on deformation of profile-wall plastic pipes buried in coarse granular backfill, (Sargand, S, Masada, T, and Hurd, JO), June, 217
Residual strength
Automated apparatus for three-dimensional monotonic and cyclic testing of interfaces (Fakharian, K and Evgin, E), March, 22
Constant volume ring shear apparatus (Stark, TD and Contreras, IA), March, 3

Resilient modulus
Alternative test method for resilient modulus of fine-grained subgrades (Drumm, EC, Li, Z, Reeves, JS, and Madgett, MR), June, 141

Sand
Measuring anisotropic elastic properties of sand using a large triaxial specimen (Hoque, E, Tatsuoka F, and Sato, T), Dec., 411
Large-scale model testing of laterally loaded drilled shafts in sand, (Agaihy, SW, Kulhawiy, FH, and Trautmann, CH), March, 32
Laboratory evaluation of horizontal stress in overconsolidated sands (Abdi, H and Garga, VK), March, 85
Laboratory testing apparatus for slopes stabilized by anchored geosynthetics, (Ghiaasi, H, Hryciw, RD, and Gray, DH), March, 65

Saturation
Measurements of soluble salt content of soils from arid and semi-arid regions (Karakouzian, M, Pitchford, A, Leon, M, and Johnson, B), Dec., 364

Secondary compression
Determination of coefficient of consolidation from early stage of log t plot (Robinson, RG and Allam, MM), Sept., 316

Shear wave
Measurement of shear waves in laboratory specimens by means of piezoelectric transducers, (Brignoli, EGM, Gotti, M, and Stokoee, KH, II), Dec., 384

Shear strength
Relationship between the soil-water characteristic curve and the unsaturated shear strength of a compacted glacial till, (Vanapalli, SK, Fredlund, DG, and Pufahl, DE), Sept., 259

Shear banding
Effects of shear band formation in triaxial extension tests, (Lade, PV, Yamamuro, JA, and Skyers, BD), Dec., 398

Slopes
Model size effects in centrifuge models of granular slope instability (Goodings, DJ and Gillette, DR), Sept., 277

Soft clays
Constant volume ring shear apparatus (Stark, TD and Contreras, IA), March, 3

Soil cement
Evaluation of sulfate expansion in soil-cements (Ksaibati, K and Huntington, GS), Sept., 269

Soil-bentonite mixtures
Determining bentonite content in soil-bentonite mixtures using electrical conductivity (Abu-Hassanein, ZS, Benson, CH, Wang, X, and Blotz, LR), March, 51

Soil structure
Advances in conductometric phase transition porosimetry (Gunnink, BW), March, 74

Solubility
Measurements of soluble salt content of soils from arid and semi-arid regions (Karakouzian, M, Pitchford, A, Leon, M, and Johnson, B), Dec., 364

Stabilization
Laboratory testing apparatus for slopes stabilized by anchored geosynthetics, (Ghiaasi, H, Hryciw, RD, and Gray, DH), March, 65

Standardization

Stress state
Relationship between the soil-water characteristic curve and the unsaturated shear strength of a compacted glacial till, (Vanapalli, SK, Fredlund, DG, and Pufahl, DE), Sept., 259

Subsurface investigations
Device for the measurement of sub-surface ground vibrations, (Leong, EC, Cheong, HK, and Pan, TC), Sept., 286

Sulfate expansion
Evaluation of sulfate expansion in cement systems (Ksaibati, K and Huntington, GS), Sept., 269

Swelling
Coupled heat and moisture flow in unsaturated swelling clay barriers (Mohamed, AMO, Yong, RN, Onofrei, CI, and Kjartanson, BH), June, 155

Tire chips
Engineering properties of tire/soil mixtures as a lightweight fill material (Masad, E, Taha, R, Ho, C, and Papagianakis, T), Sept., 297

Tensile extension
Effects of shear band formation in triaxial extension tests, (Lade, PV, Yamamuro, JA, and Skyers, BD), Dec., 398

Tensile testing
Measuring anisotropic elastic properties of sand using a large triaxial specimen (Hoque, E, Tatsuoka F, and Sato, T), Dec., 411
Alternative test method for resilient modulus of fine-grained subgrades (Drumm, EC, Li, Z, Reeves, JS, and Madgett, MR), June, 141

Uniform strains
Effects of shear band formation in triaxial extension tests, (Lade, PV, Yamamuro, JA, and Skyers, BD), Dec., 398

Unsaturated soils
Consolidation apparatus for testing unsaturated soils (Rahardjo, H and Fredlund, DG), Dec., 341
Air volume change measurement in unsaturated soil testing using a digital pressure-volume controller, (Adams, BA,
Wulfsohn, D., and Fredlund, DG), March, 12
Coupled heat and moisture flow in unsaturated swelling clay barriers (Mohamed, AMO, Yong, RN, Onofrei, CI, and Kjartanson, BH), June, 155
Relationship between the soil-water characteristic curve and the unsaturated shear strength of a compacted glacial till, (Vanapalli, SK, Fredlund, DG, and Pufahl, DE), Sept., 259
New technique for diffusion testing of unsaturated soil, (Barbour, SL, Lim, PC, and Fredlund, DG), Sept., 247

Vibrations
Device for the measurement of sub-surface ground vibrations, (Leong, EC, Cheong, HK, and Pan, TC), Sept., 286

W

Water pressure
Water pressure measurement with time domain reflectometry cables, (Dowding, CH, Huang, F-C, and McComb, PS), March, 58

Wave propagation
Wave propagation in soils: multi-mode, wide-band testing in a waveguide device (Fratta, D and Santamarina, JC), June, 130

Wide width strip test
Cylindrical expansion test for tensile properties of geotextiles, (Salman, AG, Juran, I, and Potnis, A), Dec., 432