

## Subject Index

### A

Accreting soil layers, 29  
 Adriatic Coast, peaty soils, 226  
 Adsorption wastewater sludges,  
   74  
 Australia, Melbourne sand  
   washing slimes, 293

### B

Barrier layers, 91  
 Batch leaching tests, 123  
 Bentonite slurries, 137  
 Bulk density, 165, 243

### C

Calcium carbonate, 351  
 California Bearing Ratio, 152  
 Cam-clay model, 48  
 Capping, 74, 91, 255, 309  
 C-CORE Shear Wave Profiling  
   System, 243  
 Cement-stabilized waste sludge,  
   123, 152  
 Cement treated soils, 196  
 Cement, water, ratio, 196  
 Centrifugal force, 279  
 Centrifuge, geotechnical, 165  
 China, transformer station/  
   dewatering system, 363  
 Chromium, 123  
 Clays, 91, 279  
   kaolin, 165  
   organic, 48  
   paper, 108  
   soft, 337  
 Compressibility, 3, 29, 74, 309  
   secondary, 48  
 Compression  
   secondary, 226  
   soil, 375  
   unconfined, 152  
 Compressional wave velocity, 165  
 Concrete panels, precast, 337

Cone penetration, 152  
 Consolidation, 48, 209, 267, 375  
   dewatering, 64  
   effect evaluation, 255  
   large strain model, 29  
   peaty soil, 226  
   self-weight, 165, 324  
   settlement, 309, 351  
   waste, 181  
   wastewater sludges, 74  
 Creep, 48  
 CS4 piecewise-linear model, 29

### D

Densitometer, 243  
 Dewatering, 3, 279  
   structures, 64  
   system, 363  
 Diaphragm wall, 363  
 Diked impoundment area, 3  
 Dredge spoils, 64, 243  
 Dredging plan, New York and  
   New Jersey, 152  
 Drying rate, 196  
 Dual probe method, 137

### E

Earth pressure at rest, 209  
 Earth, reinforced, wall stability,  
   337  
 Effective strength, 209  
 Embankments  
   construction, 267  
   highway, 351  
 Eulerian coordinate system, 29  
 Excavation, deep, dewatering  
   system for, 363

### F

Field vane tests, 255  
 Finite element codes, 48  
 Floccs, 74

## 390 GEOTECHNICS OF HIGH WATER CONTENT MATERIALS

### G

- Golden Horn river outlet, sediment dredging and disposal, 324
- Grain size, 64
- Granular backfill, 337

### H

- Heat capacity, 137
- Heat transfer prediction, 137
- Heave markers, 267
- Hydraulic conductivity, 3, 29, 181, 309
  - column leaching test, 123
  - paper sludge barriers, 91

### I

- Inclinometers, 267
- Infiltrometers, sealed double-ring, 91
- Instrumented settling column, 165

### J

- Japanese status, sediment contamination, 123

### L

- Landfill covers, 91, 255, 309
- Landfill isolation, 293
- Leaching, 123
- Lead, 123
- Lime waste, 351
- Liquid exuding potential, 181
- Load increment ratio, 226

### M

- Malaysia, trial embankments, 267
- Massachusetts landfill covers, 255
- Melbourne sand mining, 293
- Metals, heavy, 108, 123
- Mine tailings, 64
- Mining, sand, 293
- Minnesota samples, 209

### Modeling

- Cam-clay model, 48
  - large strain, 309
  - large strain consolidation, 29
  - nonlinear finite-strain numerical model, 309
  - numerical, 29, 324
  - piecewise linear, 3
  - stress-strain-creep strain rate model, 48
- Moisture ratio, 196
  - Mud-water treatment, 279

### N

- Needle probe method, 137
- Newark Harbor, 152
- Nuclear density test, 152

### O

- Oedometer tests, 226, 309
- Ore, 3
- Organic soil, 209
- Oxford University Densitometer, 243

### P

- Paper mill sludge landfill covers, 255
- Paper sludge, 91, 108, 255
- Peat, 137, 209, 226, 267
  - subsidence, 375
- Permeability, 226, 293
- Permeameters, two-stage borehole, 91
- Piezometers, 267
- Planetary rotation chambers, 279
- Plasticity, 351
- Polychlorinated biphenyls, 309
- Pore fluid, 64
- Pore pressures, 48, 74, 165, 226, 351
- Pore water pressure, 363
- Power transformer station, excavation dewatering system, 363

Pressure transfer, lateral earth, 209  
 Process tailings, 3  
 Profiling system, shear wave, 243

**R**

Reclamation, 3  
 Resilient modulus, 152  
 River outlet rehabilitation, Golden Horn, 324  
 Roadway embankment, 351  
 Rotation chambers, planetary, 279  
 Rowe cell, 226

**S**

Sand washing slimes, 293  
 Sediment, 64  
     dredged, 152  
 Seepage forces, 375  
 Settlement, 324  
     consolidation, 351  
     differential, 337  
     surface, 363  
     total, 337  
 Settling ponds, 64  
 Sewage, 74  
 Shear stiffness, small strain, 243  
 Shear strength, 74, 209, 255  
     paper mill landfill covers, 255  
     undrained, 243  
 Shear velocity, 243  
 Shear wave amplitude, 243  
 Sidewall liner, 293  
 Slimes, 293  
 Slope stability, 255  
 Sludge, 74, 137  
     capping, 309  
     cement-stabilized waste, 123, 152  
     landfill covers, 255  
     paper, 91, 108  
     waste, liquid exuded, 181  
 Slurry, 279  
 Slurry wall, 108  
 Small strain shear stiffness, 243  
 Soil, cement treated, 196  
 Soil compression, 375  
 Soil layers, accreting, 29  
 Soil moisture ratio, 196  
 Soil, soft, 48, 64, 243, 267

Solution chart, 29  
 Stability  
     channel, 324  
     dikes, 3  
     global, 337  
     reinforced earth walls, 337  
     slope, 255  
 Stabilization, soil, 123  
 Steel reinforcements, 337  
 Stiffness, 243  
 Strain, finite, 309  
 Strain, large, 29, 309, 324  
 Strain rate model, 48  
 Stress, effective, 91  
 Surface settlement, 363  
 Suspension theory, 165

**T**

Thermal conductivity, 137  
 Thermal diffusivity, 137  
 Trial embankments, 267

**U**

Undrained strength, 209, 243

**V**

Void ratio, 29

**W**

Walls, diaphragm, 363  
 Walls, reinforced earth, 337  
 Walls, slime cut-off, 293  
 Waste containment, slimes for, 293

## 392 GEOTECHNICS OF HIGH WATER CONTENT MATERIALS

- Waste sludge
  - cement stabilized, 123
  - liquid exuded by, 181
- Waste, 181
  - heat transfer, 137
  - soil-like, 3
  - solid, 137
- Wastewater, 74, 181
  - sludge, 309
  - treatment, 108
- Water-cement ratio, 196
- Wave velocity, compressional, 165
- Wells, pumping, 363
- Wisconsin, 209
  - Madison Metropolitan Sewerage District, 309
- Wood chip/soil cap, 309