ERRATUM

Figures 2 and 4 of the paper "Rigid Plate Settlements on Soils with Varying Deformation Properties" by Yakov M. Reznik, published in the June 1995 issue of Geotechnical Testing Journal, contained errors. The correct versions of these two figures are shown below.

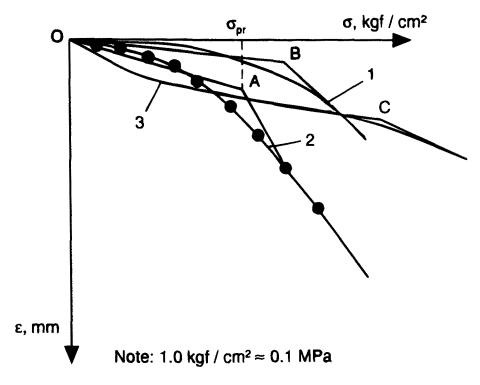
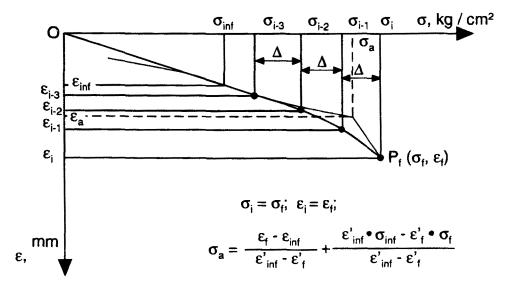


FIG. 2—Typical plate load-settlement curves for different soils: 1—overconsolidated or swelling soils; 2—normally consolidated or underconsolidated soils; 3—soils whose mechanical properties improve with increasing depth.



Note: $1.0 \text{ kgf} / \text{cm}^2 \approx 0.1 \text{ MPa}$

FIG. 4—Illustration of the proposed method of plate-load test result interpretation for the soils whose deformation properties improve with increasing depth.

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Transportation, and Storage

2.13 Physicochemical Testing

2.14 Stress-Strain, Strength

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|-------------|--|------------|--|
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| 4.9 | Stress-Strain, Strength | 7.4 | Chemical Properties |
| 4.10 | Liquefaction Tests | 7.5 | Durability Properties |
| 4.11 | , — , | 7.6 | |
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| 4.13 | Microscopic Analysis | 7.8 | Other |
| 4.14 | Other | | |
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| 5.4 | Permeability, Void Ratio, Pore-Size Distribution, | 8.6 | Simulated Soil and Rock |
| | Water Content | 8.7 | Centrifuge Tests |
| 5.5 | Stress-Strain, Strength | 8.8 | Other |
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| 5.7 | Fracture-toughness | | |
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ASTM Task Group on Data Automation Questionnaire for Geotechnical Laboratories

| Ţ. | | Position_ | | | | | *************************************** | | | |
|---|--|---|-------------------|---|--|--------------------------------|---|--------|--------------------------------------|-----------------------------|
| | Type of Organization: University Government List testing or standards organizations in which you participate | Government Sh you participate | Consulting | ing | Industry | | | | | |
| 2 | With regard to the general laboratory: Number of staff devoted to lab | staff devoted to la | | Floor area in sq. ft. | æ | | | | | |
| | Which do you have on staff? Machinist Mechanical engineer Electronic specialist Instrum Which of the following do you have? Temperature Control Dust Control Emergency Power | hanical engineer ture ControlD | 1 2 | ic specialist | Electronic specialist Instrumentation Specialist Software engineer t Control Emergency Power | n Specialist | Software eng | gineer | | |
| За. | . Please complete the following table for soil tests performed in your facility: | erformed in your | facility: | | | | | | | |
| W. | Soil Tests | Gradation (D422) | Limits (D4318) | Consolidation | n UC | UU (Q) (£2850) | CU (R) | CD (S) | Direct Shear | Permeability (D2434, D5084) |
| <u> </u> | Number of tests per year | | | | | | | | | |
| | Check if you automatically record data | | | | | | | | | |
| لئيي | Check if you use computer for data reduction | | | | | | | | | |
| | Check if you use computer for graphs or tables | | | | | | | | | |
| لــــــــــــــــــــــــــــــــــــــ | Estimated cost savings per test from automation | | | | | | | | | |
| l . | describe other test | | | | | | | | | |
| 4.[| Please complete the following table for rock tests performed in your facility: | erformed in your | facility: | | | | | | | |
| | Rock Tests | Strength (D2664, D2936, D2938, D3967) | | Elastic Modulus ©2845, D3148, D5407) | Permeability (D4325) | Creep (D4341, D4405, D4406) | Sonic (D2845) | | Thermal (D4535, D4612, D5334, D5335) | Other * |
| <u> </u> | Number of tests per year | | | | | | | | | |
| لـَـــ | Check if you automatically record data | | | | | | | | | |
| | Check if you use computer for data reduction | | | | | | | | | |
| لئي | Check if you use computer for graphs or tables | | | | | | | | | |
| | Estimated cost savings per test from automation | | | | | | | | | |

* describe other test____

Questionnaire for Geotechnical Laboratories ASTM Task Group on Data Automation

Ś

| If you have a data acquisition system, please answer the following questions (use a separate copy for each system) |
|---|
| Type Number of Input Channels Number of tests you monitor at once |
| Maximum Number of Readings per second you use Total Cost of hardware, excluding sensors |
| Total cost of sensors How are data stored? printed tape floppy disk hard disk other |
| Describe what you use the system for |
| Does the system control the test Describe how |
| How much time required to train a new user Frequency of breakdown Describe reliability |
| Did supplier offer service contract Did you take it Cost of service contract as percent of original system purchase price |
| Describe experience with service |
| Is system rugged Give examples |
| Has system been cost effective? Give example |
| Are you considering additional equipment If yes please answer #7. |
| How do you charge your clients for use of the system |
| Would you buy the same system again Why |
| |
| If your data acquisition system uses software to collect and reduce data, please answer the following: |
| Function of software:collect datasort data for test from master data filereduce dataplot resultsshow real-time graphs of test |
| control testplace data in master data baseperform statistical and/or engineering evaluations of data |
| Programming language usedOperating system used |
| How much time to train new user Who corrects deficiencies |
| Can you modify software Is software flexible enough for your needs |
| Describe software problems you have had |
| Would you buy same system again Why |
| |

What information is most helpful in selecting a new system (please rank by importance with 1 as highest) __manufacturer's literature __specs __example results __reliability of system Which parts will you automate? collect data reduce data after test plot results for report provide real-time graph as test runs control test other If you have no data acquisition equipment or are considering expansion of your present system develop software in-house Do you plan further automation in the near future? Why experience of another with system ___ other (specify_ Which tests do you plan to automate? Will you ____purchase software _ ۲.

Is your software available to others

ø

Does your company use data acquisition equipment in field applications? ___ Describe . œ

What standards would be helpful to you in regard to using your data acquisition equipment?

6

Please comment on your experiences with data acquisition systems, positive and negative. . 0

Thank you for your time and help. Please mail the completed questionnaire to: D18.95 Data Automation Survey, c/o Bob Morgan, ASTM, 1916 Race Street, Philadelphia, PA 19103-1187. Phone any questions to Dr. Marr at (508) 635-0012.

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Howard J. Pincus, Ph.D., P.E., C.P.G. Technical Editor



E 380 SELECTED CONVERSION FACTORS

| To convert from | to | multiply by |
|---|---|--------------------------------------|
| atmosphere (760 mm Hg) | pascal (Pa) | 1.013 25 x 10 ^s |
| board foot | cubic metre (m³) | 2.359 737 x 10 ⁻³ |
| Btu (International Table) | joule (J) | 1.055 056 x 10 ³ |
| Btu (International Table)/h | watt (W) | 2.930 711 x 10 -i |
| Btu (International Table)•in /s•ft²• °F (k, thermal conductivity) | watt per metre kelvin [W/(m•K)] | 5.192 204 x 10 ² |
| calorie (International Table) | joule (J) | 4.186 800* |
| centipose | pascal second (Pa•s) | 1.000 000* x 10 ⁻³ |
| centistokes | square metre per second (m ² /s) | 1.000 000* 10-6 |
| circular mil | square metre (m ²) | 5.067 075 x 10 ⁻¹⁰ |
| degree Farenheit | degree Celsius | $t^{\circ}C = (t^{\circ}F - 32)/1.8$ |
| foot | metre (m) | 3.048 000* x 10 ⁻¹ |
| ft² | square metre (m ²) | 9.290 304* 10-2 |
| ft³ | cubic metre (m³) | 2.831 685 x 10 ⁻² |
| ft•lbf | joule (J) | 1.355 818 |
| ft•lbf/min | watt (W) | 2.259 697 x 10 ⁻² |
| ft/s² | metre per second squared (m/s²) | 3.048 000* x 10 ⁻¹ |
| gallon (U.S. liquid) | cubic metre (m³) | 3.785 412 x 10 ⁻³ |
| horsepower (electric) | watt (W) | 7.460 000* x 10 ⁺² |
| inch | metre (m) | 2.540 000* x 10 ⁻² |
| in.² | square metre (m ²) | 6.451 600* x 10⁴ |
| in. ³ | cubic metre (m³) | 1.683 706 x 10 ⁻⁵ |
| inch of mercury (60°F) | pascal (Pa) | 3.376 85 x 10 ³ |
| inch of water (60°F) | pascal (Pa) | $2.488 4 \times 10^{2}$ |
| kgf/cm ² | pascal (Pa) | 9.806 650* x 10 ⁴ |
| kip (1000 lbf) | newton (N) | 4.448 222 x 10 ³ |
| kip/in.² (ksi) | pascal (Pa) | 6.894 757 x 10° |
| ounce (U.S. fluid) | cubic metre (m³) | 2.957 353 x 10 ⁻⁵ |
| ounce-force | newton (N) | 2.780 139 x 10 ⁻¹ |
| ounce (avoirdupois) | kilogram (kg) | 2.834 952 x 10 ⁻² |
| oz (avoirdupois)/ft² | kilogram per square metre (kg/m²) | 3.051 517 x 10 ⁻¹ |
| oz (avoirdupois)/yd² | kilogram per square metre (kg/m²) | 3.390 575 x 10 ⁻² |
| oz (avoirdupois)/gal (U.S. liquid) | kilogram per cubic metre (kg/m³) | 7.489 152 |
| pint (U.S. liquid) | cubic metre (m³) | 4.731 765 x 10⁴ |
| pound-fource (lbf) | newton (N) | 4.448 222 |
| pound (lb avoirdupois) | kilogram (kg) | 4.535 924 x 10 ⁻¹ |
| lbf/in² (psi) | pascal (Pa) | 6.894 757 x 10 ³ |
| lb/in ³ | kilogram per cubic metre (kg/m³) | 2.767 990 x 10⁴ |
| lb/ft³ | kilogram per cubic metre (kg/m³) | 1.601 846 x 10 |
| quart (U.S. liquid) | cubic metre (m³) | 9.463 529 x 10⁴ |
| ton (short, 2000lb) | kilogram (kg) | 9.071 847 x 10 ² |
| torr (mm Hg, 0°C) | pascal (Pa) | $1.333 22 \times 10^2$ |
| W•h | joule (J) | 3.600 000* x 10 ³ |
| yard | metre (m) | 9.144 000* x 10 ⁻¹ |
| yd² | square metre (m ²) | 8.361 274 x 10 ⁻¹ |
| yd³ | cubic metre (m³) | 7.645 549 x 10 ⁻¹ |

^{*}Exact