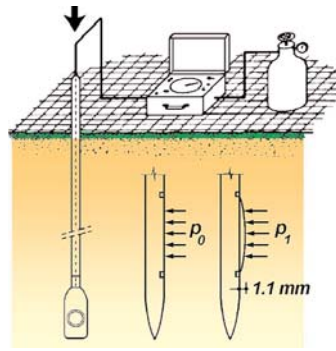


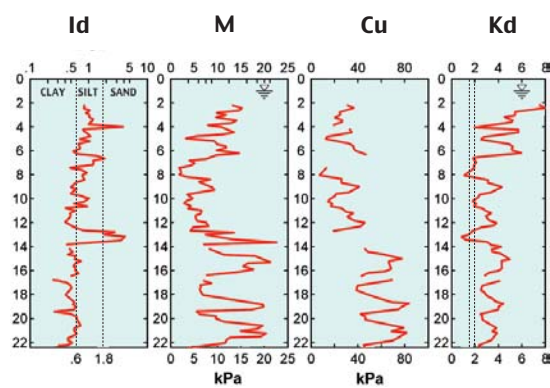
DMT – Flat Dilatometer Settlements and moduli



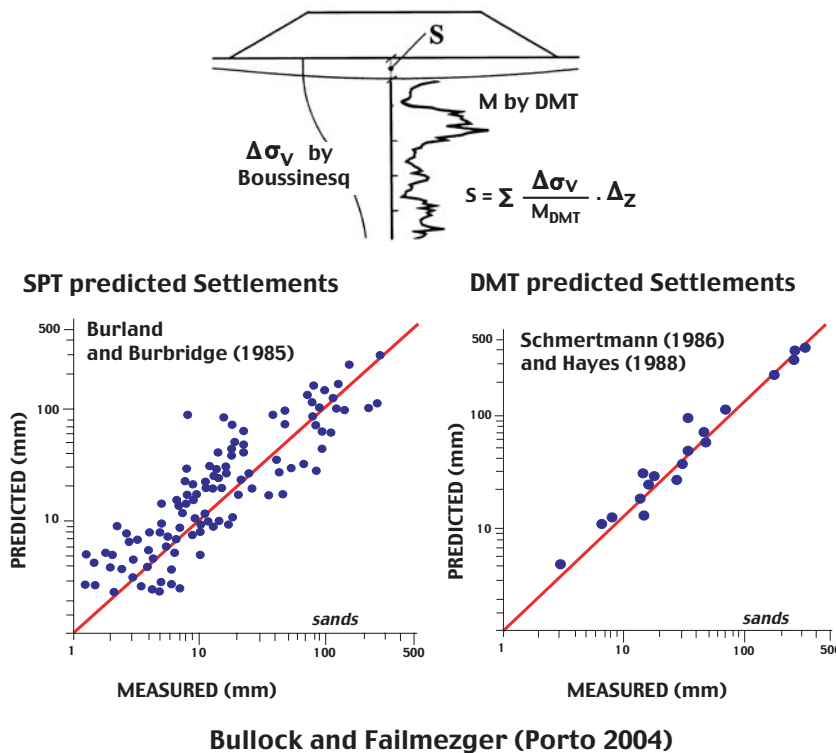
ADVANTAGES

- quick, simple and economical
- quantitative design parameters
- highly reproducible results
- usable with most insertion machines
- used in over 40 countries
- international standards

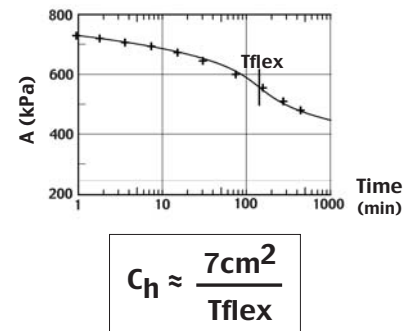
Soil parameters



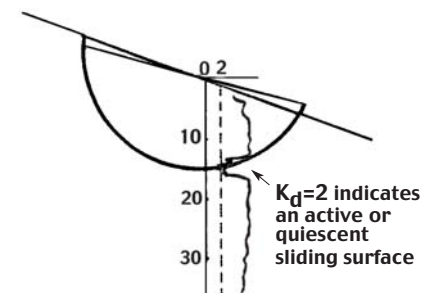
Settlement prediction



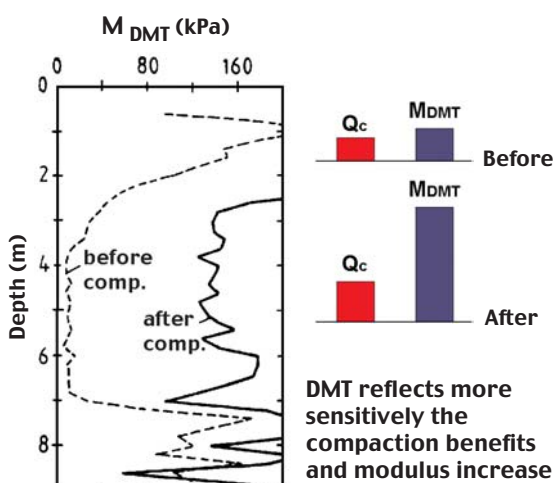
Consolidation & permeability coefficients



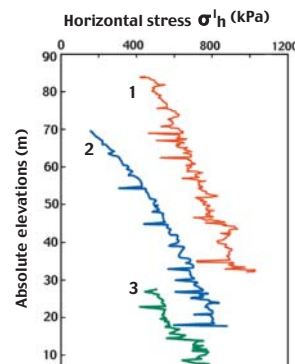
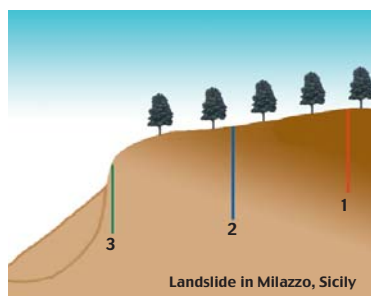
Locating slip surfaces



Compaction control



σ_h relaxation behind a landslide

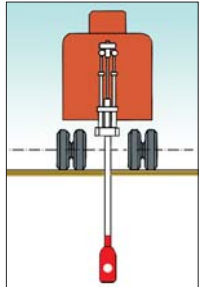


Liquefaction Recommendations

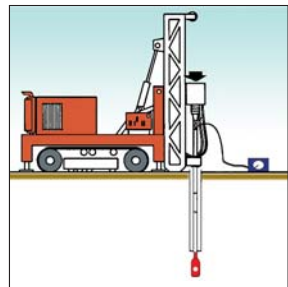
K_d limits for safety vs liquefaction (for a magnitude = 7.5 earthquake)

Seismicity	a _{max} /g	K _d min
Nonseismic	/	1.7
Low seismicity	0,15	4.2
Average seismicity	0,25	5.0
High seismicity	0,35	5.5

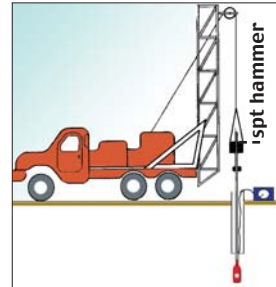
Pushed by truck



Pushed by drill rig



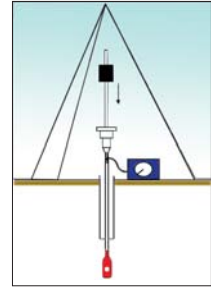
Driven by drill rig



Pushed by a fixed platform



Driven by Spt Tripod



BLADE INSERTION

APPLICATIONS

- Settlement Prediction
- Operative moduli M
- Undrained shear strength Cu (clays)
- Soil Stratigraphy (sand, silt, clay)
- Compaction control
- Detects slip surfaces in clay slopes
- P-y curves for laterally loaded piles
- Sand liquefaction
- Coefficient of consolidation and permeability (clay)
- φ in sand
- OCR and K₀ in clay
- Subgrade K_h for diaphragms
- FEM/Plaxis parameters
- Pavement subgrade modulus



EUROCODE 7 (1997). Standard Test Method, European Committee for Standardization Part 3: Design Assisted by Field Testing, Section 9: FLAT DILATOMETER TEST (DMT), 9 pp.



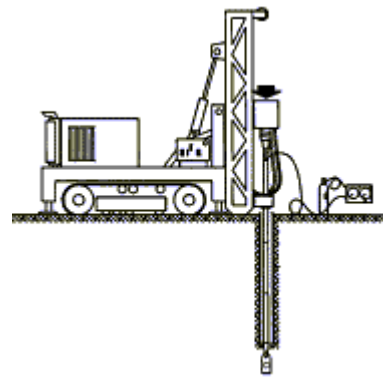
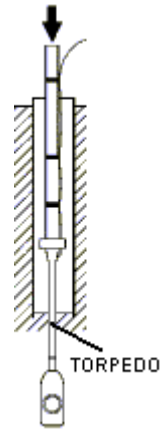
TC16 (2001). "The DMT in soil Investigations", a Report by the ISSMGE Technical Committee TC16 on Ground Property, Characterization from in-situ testing, 41 pp.



ASTM (2002). Standard Test Method D6635-01, American Society for Testing and Materials The standard test method for performing the Flat Dilatometer Test (DMT), 14 pp.

WAYS OF INSERTING THE BLADE

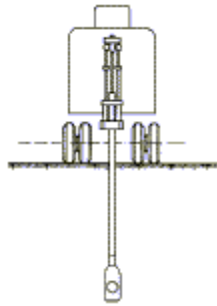
"TORPEDO MODE"



"NO BOREHOLE"



PENETROMETER



PERCUSSION

