



PDHonline Course C264 (4 PDH)

Laboratory Testing and Interpretation of Rock Properties

Instructor: John Huang, Ph.D., PE and John Poullain, PE

2020

PDH Online | PDH Center

5272 Meadow Estates Drive
Fairfax, VA 22030-6658
Phone: 703-988-0088
www.PDHonline.com

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Terms and Definitions

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| Anisotropy | Not isotropic, elasticity properties are not the same in all directions |
| Aperture | A hole or gap in rock mass |
| Asperities | Roughness, hardness |
| Clastic | Sedimentary rock made of fragments of preexisting rocks & minerals |
| Diabase | Igneous rock commonly including feldspar |
| Dilatancy | Property of volume expansion due to deformation and the hydraulic integrity is altered and permeability is increased |
| Dip | Angle of fractures, slip planes made with the horizon, measured on rock cores with protractors |
| Extrusive | Having been forced while molten into fissures of other rock |
| Fabric | The spacial pattern of rock parcels, grain size, shapes, packing, interlocking particles |
| Foliation | An arrangement of rock in leaf-like layers |
| Goodman Jack | Used for in-situ investigation of soil and rock deformability, used in borehole to measure displacement and consolidation-time preparation |
| Induration | Having hardness or a hardened condition |
| Intrusive | Having been forced out in molten condition at surface of earth |
| Isotropic | Elastic properties are the same in all directions |
| MPa | Megapascal, 1 MPa = 10.44 ton per square foot (tsf) |
| Orthorhombic | Crystallization where three unequal axes intersecting at right angles |
| Osterberg Load Cell | The "O-cell" is hydraulically driven (75-5,000 tons), installed within the foundation to be tested, and allows direct measurement of expansion, compression, side shear and top of pile shaft measurements |
| Persistence | Measured length of fractures |
| RQD | Rock Quality Designation, percentage of the sum all pieces of sound core over 100mm in length divided by the total length of core run |
| Saprolite | Decomposed rock remaining in its original position |
| Slake | Some rocks that crumble when freshly exposed to air, water slaking also occurs |
| Strike | Direction of contour lines, equal elevations, on the surface of a rock mass |
| Texture | Grain particle arrangement on a freshly exposed surface |
| Uniaxial Compression | No lateral confinement when and only an axial force is applied |