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LIST OF SYMBOLS

ASTM = American Society of Testing and Materials

BET = Brunauer, Emmett and Teller (1938)

EG = Ethylene Glycol

EGME = Ethylene Glycol Monoethyl Ether

erf = Error Function

CEC = Cation Exchange Capacity (meq/100g)

CPT = Cone Penetration Test

LL = Liquid Limit (%)

PL = Plastic Limit (%)

PI = Plasticity Index

MB = Methylene Blue

SA = Surface Area (m^2)

SPT = Standard Penetration Test

TDR = Time Domain Reflectometry

USCS = Unified Soil Classification System

C_c = Compressibility Index (m^2/kN)

$C_{\varepsilon c}$ = Compressibility Ratio

c_v = Coefficient of Consolidation (m/s)

f = Frequency (Hz)

$\overline{f}$ = Averaging Shape Factor

F = Formation Factor

G_s = Specific Gravity

G_{max} = Small Strain Shear Modulus

k_h = Hydraulic Conductivity (m/s);

k = Boltzmann's constant

k_h = Hydraulic Conductivity (m/s)

K = Hydraulic Permeability (m^2)

n = Porosity

m_v = Compressibility (m^2/kN)

R = Axial Ratio of Spheroid

S_a = Specific Surface Area (m^2/g)

S_r = Degree of Saturation

V_s = Shear Wave Velocity (m/s)

w = Gravimetric Water Content

Z_s = Source Impedance of TDR (Ω)

Z_{in} = Input Impedance (Ω)

Z_L = Terminal Impedance (Ω)

ε_0 = Permittivity of Free Space (8.854×10^{-12} F/m)

ε = Complex Permittivity (F/m)

ϕ_r = Residual Friction Angle

ϕ_c = Critical State Friction Angle

κ' = Real Permittivity (Dielectric Constant)

κ'' = Polarization Loss

κ^* = Equivalent Dielectric Permittivity

κ_a = Apparent Dielectric Permittivity

θ = Volumetric Water Content

γ = Propagation Constant

σ_{eff} = Effective Electrical Conductivity (S/m)

σ_{el} = Direct Current Electrical Conductivity of the Pore Fluid (S/m)

σ_{mx} = Direct Current Electrical Conductivity of a Mixture (S/m)

σ_n = Normal Stress (Psi or kPa)

τ = Shear Resistance (Psi or kPa)

ω = Angular Frequency