NOMENCLATURE

a = interfacial area per unit volume (ft^{-1})

c = tracer concentration (mg/L)

c^* = equilibrium oxygen concentration (mg/L)

c_f = slurry feed concentration or final concentration of dissolved oxygen (lb/ft^3 or mg/L)

c_i = initial concentration of dissolved oxygen (mg/L)

C_s = concentration of solid particles in the slurry (lb/ft^3)

C_1 = nondimensional constant

D = column inside diameter (ft)

E_{ZL} = axial liquid dispersion coefficient (ft^2/sec)

E_{Zp} = solid axial dispersion coefficient (ft^2/sec)

F_{RG} = gas Froude number (nondimensional)

g = gravitational acceleration (ft/sec^2)

k_L = liquid-phase mass-transfer coefficient (ft/sec)

$k_L a$ = liquid-phase-mass-transfer coefficient per unit volume (sec^{-1})

L = length of column (ft)

ln = natural logarithm

N_{Bo} = Bond number (nondimensional)

N_{Fr} = Froude number (nondimensional)

N_{Ga} = Galileo number (nondimensional)

N_{sc} = Schmidt number (nondimensional)

Pe = Peclet number (nondimensional)

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