Notation

B = dimensionless adiabatic temperature rise
d_1, d_2, d_3 = load disturbance terms in Eqs. 1-3
Da = Damköhler number
g_i = sensitivity coefficient for the period-i orbit defined by Eq. 4
S = ratio of the rate constants for the series reaction
u_i = manipulable control variable
$u_{i,n}^{(i)}$ = controller output for stabilizing the period-i orbit defined by Eq. 5
x_1 = dimensionless concentration of species A
x_2 = dimensionless concentration of species B
x_3 = dimensionless temperature
x_{3c} = reference value for the dimensionless coolant temperature
$x_{3,s}^{(i)}$ = fixed point for the period-i orbit

Greek letters

α = ratio of heat effects for the series reaction
β = dimensionless heat-transfer coefficient
ϵ = dimensionless activation energy
κ = ratio of activation energies for the series reaction

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Errata

In the article titled "Circulation Model for Absorption and Dispersion in Cocurrent Bubble Columns" (Vol. 39, Feb. 1993, p. 224) by R. G. Rice, N. W. Geary, and L. F. Burns, the following corrections are made:

- In the table of contents (the fourth title on the front cover), "Adsorption" should be replaced by "Absorption."

- Lefthand side of Eq. 59 should read $1/t_\theta^*$, not t_θ^*.

- An important reference was not included: M. H. I. Baird and coworkers (*Can. J. of Chem. Eng.*, **54**, 540, 1976) were apparently the first to use an acid-base method to assess axial dispersion. They used ammonia in HCl, whereas Rice and Littlefield (1987) used sodium hydroxide in HCl.