
Scheme-6 Reactor-2

Part-2, Case-3

*tend = 720 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.12779

*Exponent a = 0.5
Exponent b = 1.5
Exponent c = 1.5
Exponent d = 0.5*

*WA = 200
WB = 56.3896
NBt = 3.00744
Vt = 2.12819
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25302
CB0 = 1.41314*

*Total input = 256.39 kg
Total output = 256.39 kg*

Chemical Balance Error = 0.000350141 kg (% 1.36566e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.1%*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125205
CB (final) = 0.00812026
CR (final) = 1.07597
CS (final) = 0.164525*

*CA @ 360.0s = 0.019139
CB @ 360.0s = 0.0202245
CR @ 360.0s = 1.07484
CS @ 360.0s = 0.159039*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0125205
CB (final) = 0.00812026
CR (final) = 1.07597
CS (final) = 0.164525*

