
Scheme-6 Reactor-2

Part-2, Case-1

*tend = 360 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.13914

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

*WA = 200
WB = 56.9571
NBt = 3.03771
Vt = 2.12848
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25285
CB0 = 1.42718*

*Total input = 256.957 kg
Total output = 256.957 kg*

Chemical Balance Error = 0.000350105 kg (% 1.3625e-06)

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

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125372
CB (final) = 0.0223759
CR (final) = 1.07583
CS (final) = 0.164486*

*CA @ 180.0s = 0.0273847
CB @ 180.0s = 0.0483172
CR @ 180.0s = 1.07207
CS @ 180.0s = 0.153392*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125372
CB (final) = 0.0223759
CR (final) = 1.07583
CS (final) = 0.164486*

