
Scheme-6 Reactor-2

Part-3, Case-2

*tend = 240 sec
k1 = 0.1, k2 = 0.002*

NBt/NA_t = 1.05762

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

*WA = 200
WB = 52.881
NBt = 2.82032
Vt = 2.12644
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25405
CB0 = 1.32631*

*Total input = 252.881 kg
Total output = 252.881 kg*

Chemical Balance Error = 7.24995e-05 kg (% 2.86694e-07)

*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) = 0.0125476
CB (final) = 0.0507127
CR (final) = 1.20741
CS (final) = 0.0340943*

*CA @ 120.0s = 0.0451347
CB @ 120.0s = 0.0876914
CR @ 120.0s = 1.17921
CS @ 120.0s = 0.0297027*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125476
CB (final) = 0.0507127
CR (final) = 1.20741
CS (final) = 0.0340943*

