
Scheme-6 Reactor-2

Part-3, Case-1

*tend = 360 sec
k1 = 0.1, k2 = 0.002*

NBt/NA_t = 1.04183

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

*WA = 200
WB = 52.0916
NBt = 2.77822
Vt = 2.12605
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25428
CB0 = 1.30675*

*Total input = 252.092 kg
Total output = 252.092 kg*

Chemical Balance Error = 7.25038e-05 kg (% 2.87609e-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) = 0.0125395
CB (final) = 0.0309063
CR (final) = 1.20764
CS (final) = 0.0341027*

*CA @ 180.0s = 0.0351582
CB @ 180.0s = 0.0568328
CR @ 180.0s = 1.18833
CS @ 180.0s = 0.0307948*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125395
CB (final) = 0.0309063
CR (final) = 1.20764
CS (final) = 0.0341027*

