
Scheme-8 Reactor-2

Part-3, Case-1

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

NBt/NA_t = 1.06487

*Exponent a = 0.5
Exponent b = 1.5
Exponent c = 1
Exponent d = 1*

*WA = 200
WB = 53.2436
NBt = 2.83966
Vt = 2.12662
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25394
CB0 = 1.33529*

*Total input = 253.244 kg
Total output = 253.244 kg*

Chemical Balance Error = 0.000153503 kg (% 6.06148e-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) = 0.0125449
CB (final) = 0.021709
CR (final) = 1.16922
CS (final) = 0.0721817*

*CA @ 180.0s = 0.0283604
CB @ 180.0s = 0.0516163
CR @ 180.0s = 1.16749
CS @ 180.0s = 0.0580898*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0125449
CB (final) = 0.021709
CR (final) = 1.16922
CS (final) = 0.0721817*

