
Scheme-8 Reactor-2

Part-2, Case-3

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

NBt/NA_t = 1.21597

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

*WA = 200
WB = 60.7984
NBt = 3.24258
Vt = 2.1304
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25172
CB0 = 1.52205*

*Total input = 260.798 kg
Total output = 260.799 kg*

Chemical Balance Error = 0.000602376 kg (% 2.30974e-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) = 0.0125272
CB (final) = 0.000106378
CR (final) = 0.956442
CS (final) = 0.282753*

*CA @ 360.0s = 0.0126961
CB @ 360.0s = 0.0037425
CR @ 360.0s = 0.95974
CS @ 360.0s = 0.279285*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0125272
CB (final) = 0.000106378
CR (final) = 0.956442
CS (final) = 0.282753*

