
Scheme-7 Reactor-2

Part-2, Case-3

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

NBt/NA_t = 1.17559

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

*WA = 200
WB = 58.7797
NBt = 3.13492
Vt = 2.12939
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.25231
CB0 = 1.47222*

*Total input = 258.78 kg
Total output = 258.78 kg*

Chemical Balance Error = 0.000473966 kg (% 1.83154e-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) = 0.0125243
CB (final) = 0.00984124
CR (final) = 1.01721
CS (final) = 0.222583*

*CA @ 360.0s = 0.0227582
CB @ 360.0s = 0.028255
CR @ 360.0s = 1.01515
CS @ 360.0s = 0.214403*

Final Concentrations with Step Size limited to 0.1

*CA (final) = 0.0125243
CB (final) = 0.00984125
CR (final) = 1.01721
CS (final) = 0.222583*

