
Scheme-8 Reactor-2

Part-1, Case-1

*tend = 6 sec
k1 = 100, k2 = 10*

NBt/NAt = 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 = 0.000602601 kg (% 2.3106e-06)

*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.1%*

Final Concentrations with Step Size limited to 0.0001

*CA (final) = 0.0125263
CB (final) = 1.22139e-26
CR (final) = 0.956337
CS (final) = 0.282858*

*CA @ 3.0s = 0.0125263
CB @ 3.0s = 3.52456e-14
CR @ 3.0s = 0.956337
CS @ 3.0s = 0.282858*

Final Concentrations with Step Size limited to 0.001

*CA (final) = 0.0125263
CB (final) = 1.22139e-26
CR (final) = 0.956337
CS (final) = 0.282858*

