
Scheme-7 Reactor-2

Part-2, Case-1

*tend = 360 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.39704

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

*WA = 200
WB = 69.8521
NBt = 3.72544
Vt = 2.13493
Tot.Solv. = 2
Sola/(SolR+Sola) = 0.5*

*CA0 = 1.24907
CB0 = 1.745*

*Total input = 269.852 kg
Total output = 269.853 kg*

Chemical Balance Error = 0.000920164 kg (% 3.40988e-06)

*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) = 0.0124916
CB (final) = 0.0774175
CR (final) = 0.805571
CS (final) = 0.431005*

*CA @ 180.0s = 0.027668
CB @ 180.0s = 0.151007
CR @ 180.0s = 0.848808
CS @ 180.0s = 0.372592*

Final Concentrations with Step Size limited to 0.01

*CA (final) = 0.0124916
CB (final) = 0.0774175
CR (final) = 0.805571
CS (final) = 0.431005*

