
Scheme-7 Reactor-1

Part-2, Case-6

*ta = 1800 sec, tm = 1200 sec
k1 = 0.1, k2 = 0.01*

NBt/NA_t = 1.01406

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

*WA = 200
WB = 50.703
NB_t = 2.70416
V_t = 2.12535
V_{at} = 1.02535
Tot.Solv. = 2
SolA/(SolR+SolA) = 0.5*

*NA₀ = 2.66667
NB₀ = 0*

*Total input = 250.703 kg
Total output = 250.703 kg*

Chemical Balance Error = 6.65974e-05 kg (% 2.65643e-07)

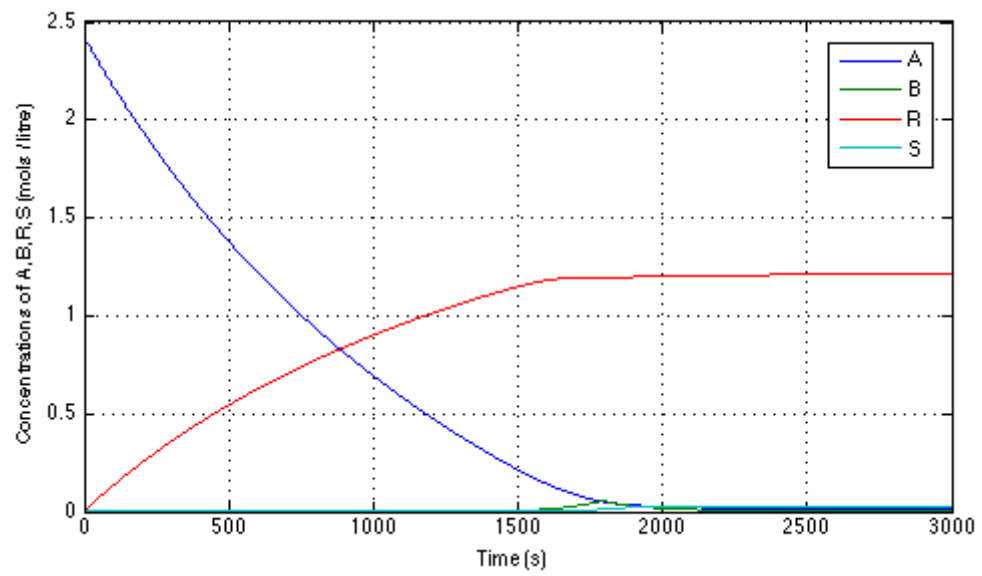
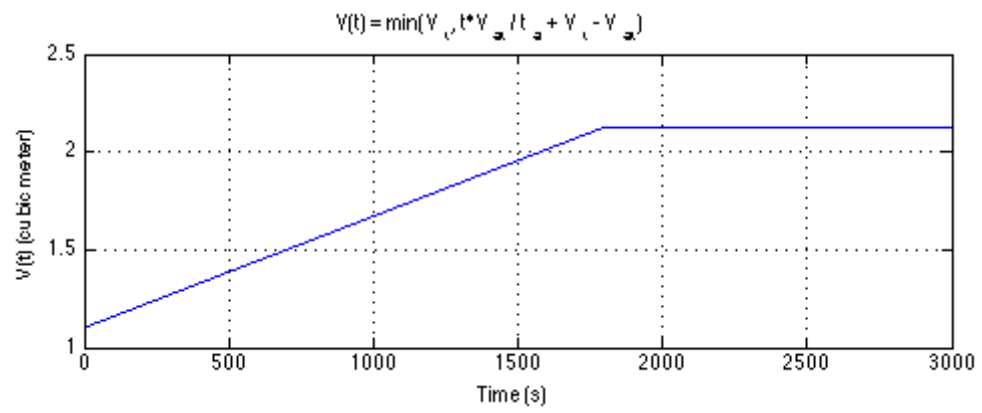
*Solver: Explicit Runge-Kutta (4,5) Variable step (Dormand-Prince Pair)
Error tolerance: 0.01%*

Final Concentrations with Step Size limited to 0.001

*NA (final) = 0.0266583
NB (final) = 0.000121776
NR (final) = 2.57598
NS (final) = 0.06403*

Final Concentrations with Step Size limited to 0.01

*NA (final) = 0.0266579
NB (final) = 0.000121827
NR (final) = 2.57598
NS (final) = 0.0640308*



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